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**NORWAY/UNITED STATES DESIGN PROTECTIVE
AIRCRAFT SHELTER (PAS) QUANTITY-DISTANCE
PROGRAM 1/3-SCALE TEST SERIES**

**Volume III of V
Appendix B: PAS-3**

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Final Report

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**PHILLIPS LABORATORY
Advanced Weapons and Survivability Directorate
AIR FORCE MATERIEL COMMAND
KIRTLAND AIR FORCE BASE, NM 87117-5776**

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This technical report has been reviewed and is approved for publication.

FOR THE COMMANDER


AARON PEREA
Project Officer


BRENDAN B. GODFREY, ST
Director, Advanced Weapons
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13. ABSTRACT (Maximum 200 words) The objective of the Combined Norwegian/U.S. Aircraft Shelter Quantity-Distance Program was to establish an experimental database that could be used to develop explosives safety criteria for a Norwegian-designed aircraft shelter. These shelters have been constructed at various bases in Europe and are used by U.S. and Norwegian air forces. The current criteria for explosives storage in aircraft shelters are based largely on U.S. aircraft shelter designs, which differ significantly in structural details from the Norwegian version. The program included four tests of 1/3-scale models of the Norwegian shelter. Charges varying from 3.7 to 100 kg of C-4 explosive were detonated inside the model shelters. Airblast pressures were measured in the interior and exterior areas surrounding the models. High-speed photography and accelerometers were used to determine structural debris trajectories and velocities. The final distribution of structural debris in the areas surrounding the models was also recorded. Volume I of this report presents a detailed discussion of the results of each test with selected experimental data. Volumes II through V provide a complete set of the experimental data gathered in each of the test events. These data will be provided to those U.S., Norwegian, and NATO agencies responsible for establishing explosives storage safety criteria for the Norwegian aircraft shelter.				
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PREFACE

This report was prepared by the New Mexico Engineering Research Institute (NMERI), The University of New Mexico, under Subtask 2.33 of Contract F29601-87-C-0001, with the Phillips Laboratory, Kirtland Air Force Base, New Mexico. The Norwegian/US Aircraft Shelter Quantity-Distance Program under which this test program was conducted was cosponsored by the United States and the Kingdom of Norway. The 1/3-scale aircraft shelter models were designed, constructed, instrumented, and tested by NMERI.

The Phillips Laboratory Program Manager and Subtask Officer for this subtask was Capt Mike Ulshafer of PL/WSB. The Phillips Laboratory Technical Coordinator was Aaron Perea. Arfin Jenssen was the Norwegian Technical Advisor/Coordinator. Dr. Edward H. Bultmann, Jr., of NMERI was the Principal Investigator for the subtask. Bruce Schneider of NMERI was the Alternate Principal Investigator for this subtask. Jon A. Kirst was the Instrumentation Engineer, Curtis Burnett was the Lead Construction (Field) Technician for this subtask. Jesse Martinez was the Lead Instrumentation Technician.

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DDT	<input type="checkbox"/>
DDU	<input type="checkbox"/>
DDV	<input type="checkbox"/>
DDW	<input type="checkbox"/>
DDX	<input type="checkbox"/>
DDY	<input type="checkbox"/>
DDZ	<input type="checkbox"/>
DDA	<input type="checkbox"/>
DDB	<input type="checkbox"/>
DDC	<input type="checkbox"/>
DDD	<input type="checkbox"/>
DDF	<input type="checkbox"/>
DDG	<input type="checkbox"/>
DDH	<input type="checkbox"/>
DDI	<input type="checkbox"/>
DDJ	<input type="checkbox"/>
DDK	<input type="checkbox"/>
DDL	<input type="checkbox"/>
DDM	<input type="checkbox"/>

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1.0 PAS-3 ELECTRONIC INSTRUMENTATION, DATA PLOTS

The PAS-3 measurements are listed in Table B-1. The locations of the various on-structure measurements are shown in Figures B-1 through B-6. The PAS-3 data plots are presented in sequential order by measurement number. The measurement number is centered below the plot; that is, PAS-3 *** 0101 *** refers to measurement number (MN) 0101. A measurement may have several plots of different vertical scales or time domains; for example, MN 0101 has both 50 and 100 ms plots. Measurement numbers with the prefix 9 are redundant recordings of gages. For example, MN 9003 is a redundant recording of MN 0003.

Table B-1. List of measurements, PAS-2.

MEASUREMENT LIST														DATE	25 MAR 92	PAGE 1 OF 4 PAGES
PAS-3														KIRST		
TEST EQUI	MEAS NO.	LOCATION			SENS AXIS	PRED MAX	CONF LEVEL	TRANSDUCER		TRANSDUCER TYPE	TRANSDUCER SERIAL NUMBER	CHANGES				
		GEN	X#	Y#				Z#	MODEL			RANGE	ITEM	AUTH	DATE	
	0101-3	SF	12807	0	367	Z	50	KULITE	1.379 MPa	PRESSURE	(1743-5-181) G7-35					
	0102-3	SF	12807	3700	367	Z	50	KULITE	34.47 MPa	PRESSURE	4319-2-17					
RDT							100	KULITE								
0102-3	SF	12807	3700	367	Z	50	MPa	HKS-11-37	34.47 MPa	PRESSURE	4319-2-17					
							50	KULITE	6.895 MPa	PRESSURE	(1906-3-340) F8-40					
0202-3	BW	13010	1700	1475	X	50	MPa	XT-190	13.79 MPa	PRESSURE	(986-2-25) V6-48					
							50	KULITE	6.895 MPa	PRESSURE	(1906-3-297) A8-64					
0301-3	SF	3976	0	367	Z	50	MPa	XT-190	6.895 MPa	PRESSURE	(1862-2-280) L7-3					
							50	KULITE	34.47 MPa	PRESSURE	(1906-3-297) A8-64					
0302-3	SF	3976	1850	367	Z	50	MPa	XT-190	6.895 MPa	PRESSURE	(1862-2-280) L7-3					
							50	KULITE	34.47 MPa	PRESSURE	(1906-3-297) A8-64					
0303-3	SF	3976	3700	367	Z	50	MPa	XT-190	6.895 MPa	PRESSURE	(1862-2-280) L7-3					
							50	KULITE	34.47 MPa	PRESSURE	(1906-3-297) A8-64					
0402-3	FD	498	100	1475	X	50	MPa	XT-190	6.895 MPa	PRESSURE	(1862-2-280) L7-3					
							16.6	KULITE	34.47 MPa	PRESSURE	(1906-3-297) A8-64					
0501-3	SF	645	3700	367	Z	50	MPa	HKS-11-37	34.47 MPa	PRESSURE	5246-5-5					
RDT							100	KULITE								
0501-3	SF	645	3700	367	Z	50	MPa	HKS-11-37	34.47 MPa	PRESSURE	5246-5-5					
							50	KULITE	13.79 MPa	(Filter) PRESSURE	102-9-9					
0601-3	SF	6818	1850	367	Z	50	MPa	HKS-11-37	13.79 MPa	PRESSURE	(1944-5-156) C8-4					
							50	KULITE	13.79 MPa	PRESSURE	(1944-5-156) C8-4					
0602-3	SF	6818	3700	367	Z	50	MPa	XT-190	13.79 MPa	PRESSURE	(1944-5-156) C8-4					

NOTES:

= Distance in millimeters

SF = Shelter Floor

RDT = Redundant

SC = Shelter Ceiling

FD = Front Door

BU = Backwall

NOTES: * = Distance in millimeters
 SF = Shelter floor
 RDT = Redundant
 SC = Shelter Ceiling
 FD = Front Door
 BU = Backwall

Table B-1. Continued.

MEASUREMENT LIST													
PAS-3													
KIRST													
TEST EVENT	LOCATION			SENS AXIS	DPRD MAX	CONF LEVEL	TRANSDUCER		TRANSDUCER TYPE	TRANSDUCER SERIAL NUMBER	CHANGES		
	GEN	X#	Y#				MODEL	RANGE			ITEM	AUTH	DATE
0603-3	SF	6818	-3700	367	Z	5.171 MPa	50	KULITE	13.79 MPa	PRESSURE (Filter)	(1944-4-143) W7-52		
0604-3	SC	6818	0	2717	Z	27.579 MPa	50	KULITE	68.95 MPa	PRESSURE	2491-3-14		
0701-3	FF	-9000	0	350	Z	48.264 kPa	50	KULITE	172.4 kPa	PRESSURE	(4073-4-166) M18-58		
0702-3	FF	-24000	0	350	Z	27.579 kPa	50	KULITE	68.95 kPa	PRESSURE	(3827-4-19) L18-92		
0703-3	FF	-34000	0	350	Z	17.237 kPa	50	KULITE	34.47 kPa	PRESSURE	(1491-2-4) U6-16		
0704-3	FF	-44000	0	350	Z	6.895 kPa	50	ENDEVCO	13.79 kPa	PRESSURE	RF86		
0705-3	FF	-54000	0	350	Z	3.447 kPa	50	ENDEVCO	13.79 kPa	PRESSURE	C93M		
0706-3	FF	-6233	10800	350	Z	41.369 kPa	60	KULITE	68.95 kPa	PRESSURE	(3827-4-17) L18-91		
0707-3	FF	-16433	21000	350	Z	27.579 kPa	50	KULITE	68.95 kPa	PRESSURE	(2650-2-110) X8-16		
0708-3	FF	-23433	28000	350	Z	17.237 kPa	50	KULITE	34.47 kPa	PRESSURE	(1495-7-76) K7-6		
0709-3	FF	-30433	35000	350	Z	6.895 kPa	50	ENDEVCO	13.79 kPa	PRESSURE	RF69		
0710-3	FF	6818	12000	350	Z	68.948 kPa	50	KULITE	172.4 kPa	PRESSURE	(4073-4-164) M18-57		

NOTES: * = Distance in millimeters
 FF = Free Field
 SC = Shelter Ceiling
 SF = Shelter Floor

Table B-1. Continued.

MEASUREMENT LIST															DATE	25 MAR 92	PAGE 3 OF 4 PAGES
PAS-3															KIRST		
TEST EVENT															190		
MEAS NO.	LOCATION			SENS AXIS	PRED MAX	CONF LEVEL	TRANSDUCER		TRANSDUCER TYPE	TRANSDUCER SERIAL NUMBER	CHANGES						
	GEN	X#	Y#				Z#	MODEL			RANGE	ITEM	AUTH	DATE			
0711-3	FF	6818	40000	350	Z	17.237 kPa	50	KULITE	34.47 kPa	PRESSURE	(1495-6-94) K7-1						
0712-3	FF	6818	50000	350	Z	6.895 kPa	50	ENDEVCO	13.79 kPa	PRESSURE	RF77						
0713-3	FF	17041	8000	350	Z	62.053 kPa	50	KULITE	172.4 kPa	PRESSURE	(4073-4-163) M18-56						
0714-3	FF	19841	10800	350	Z	41.369 kPa	60	KULITE	68.95 kPa	PRESSURE	(2650-2-111) X8-20						
0715-3	FF	30041	21000	350	Z	27.579 kPa	50	KULITE	68.95 kPa	PRESSURE	(3827-4-20) L18-93						
0716-3	FF	23000	0	350	Z	48.264 kPa	50	KULITE	172.4 kPa	PRESSURE	(4073-4-130) M18-37						
0717-3	FF	37000	0	350	Z	27.579 kPa	50	KULITE	68.95 kPa	PRESSURE	(2907-3-114) K9-35						
0718-3	FF	47000	0	350	Z	17.237 kPa	50	KULITE	34.47 kPa	PRESSURE	(1495-7-75) K7-7						
0719-3	FF	57000	0	350	Z	6.895 kPa	50	ENDEVCO	13.79 kPa	PRESSURE	RF60						
0720-3	FF	6818	-12000	350	Z	68.948 kPa	50	KULITE	172.4 kPa	PRESSURE	(4073-4-149) O18-39						
0721-3	FF	6818	-50000	350	Z	6.895 kPa	50	ENDEVCO	13.79 kPa	PRESSURE	PP49						
1601-3	SR	6818	0	2987	Z	10000 g	50	ENDEVCO	20000 g	ACCELEROMETER	DD46D						

NOTES:

= Distance in millimeters

FF = Free Field

SR = Structure Roof

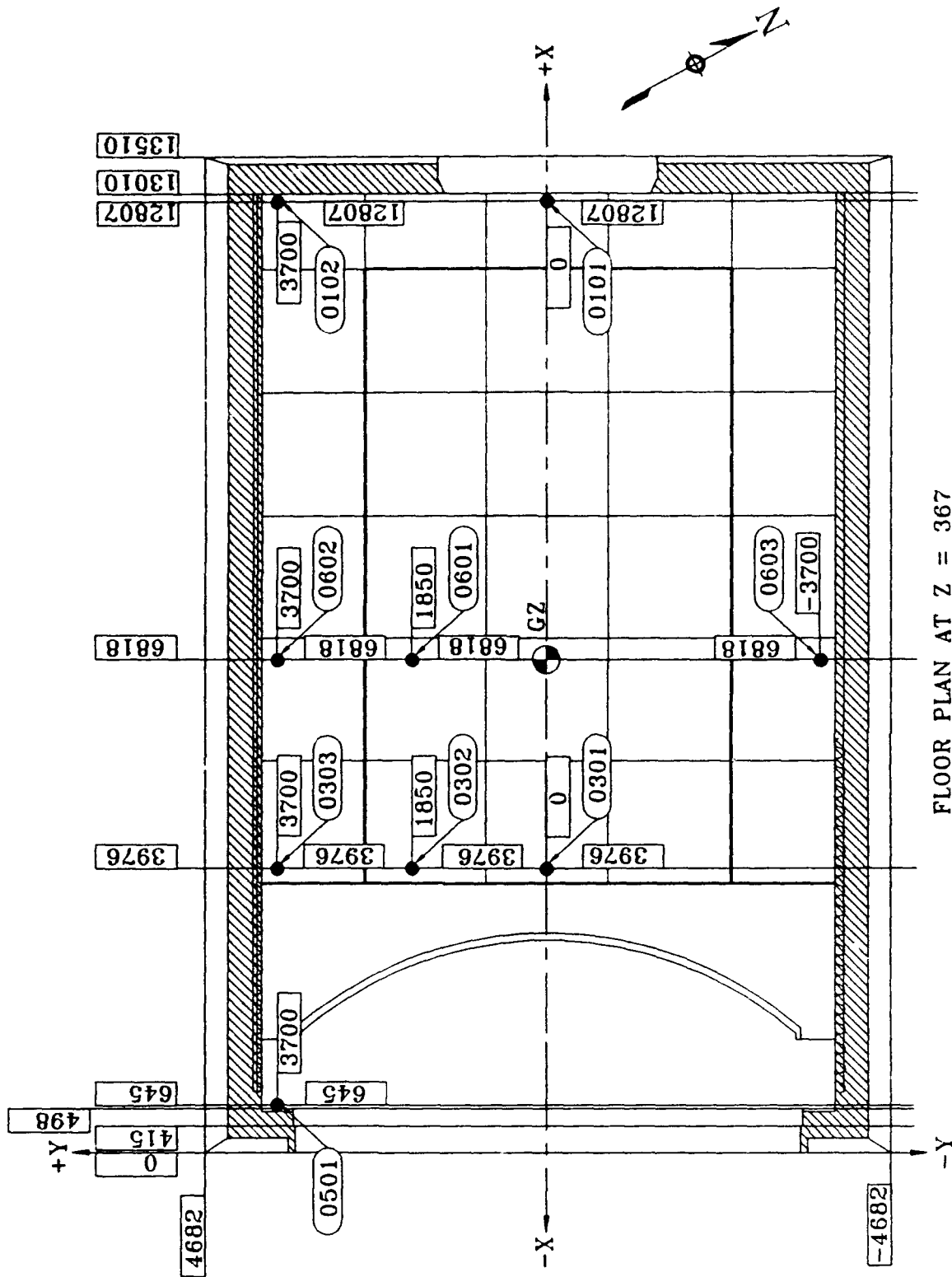
NOTES: X = Distance in millimeters

FF = Free Field

SR = Structure Roof

Table B-1. Concluded.

[illegible]



FLOOR PLAN AT Z = 367

Figure B-1. Instrumentation in floor of structure, PAS-3.

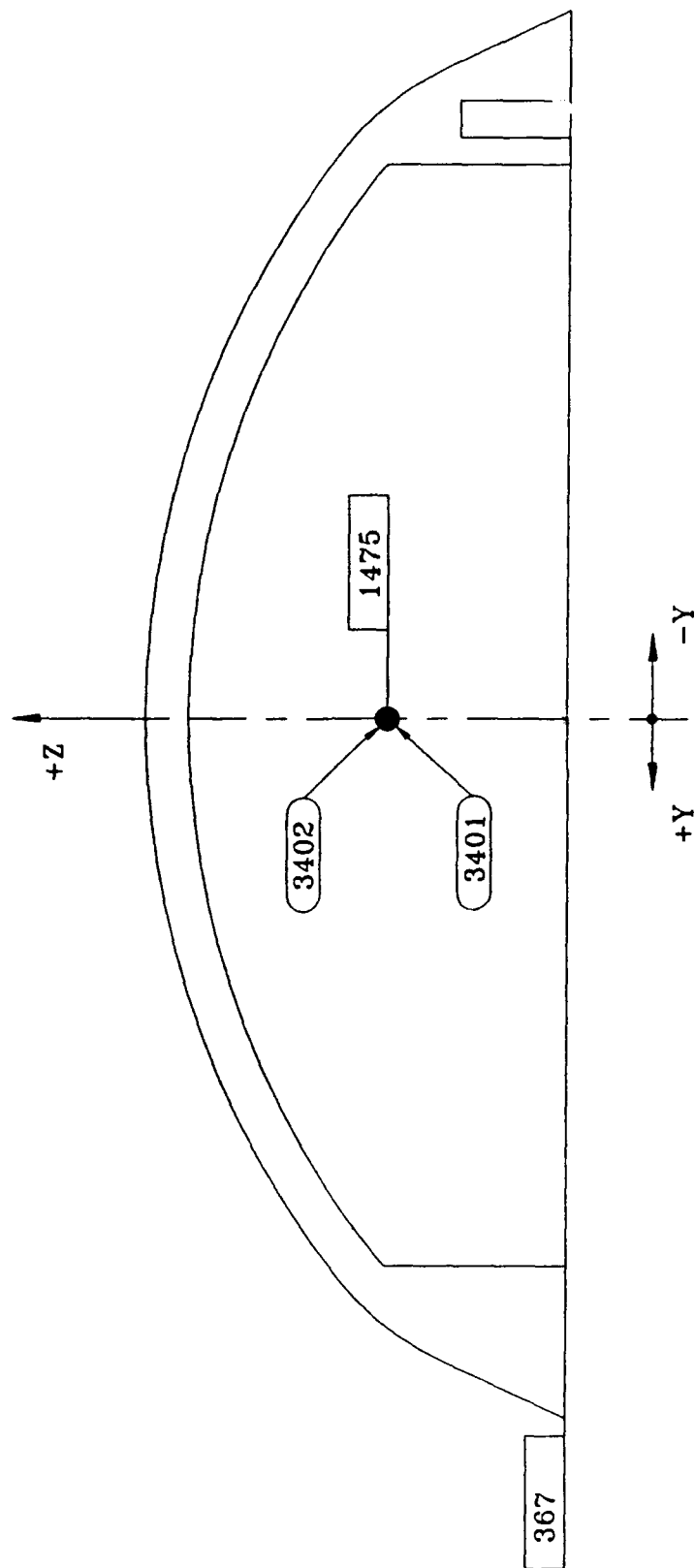


Figure B-2. Instrumentation on outside of front door at X = 415, PAS-3.

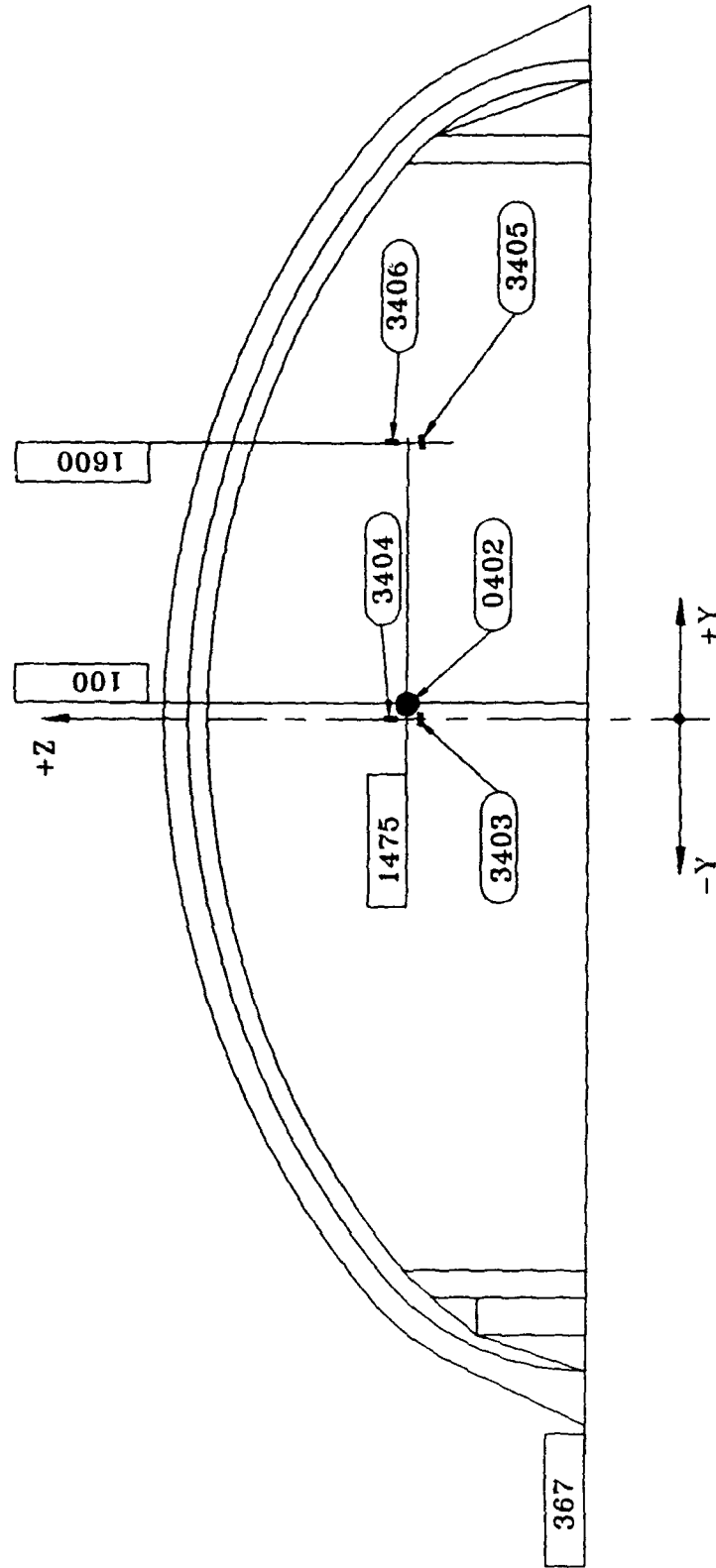


Figure B-3. Instrumentation on inside surface of front door at X = 498, PAS-3.

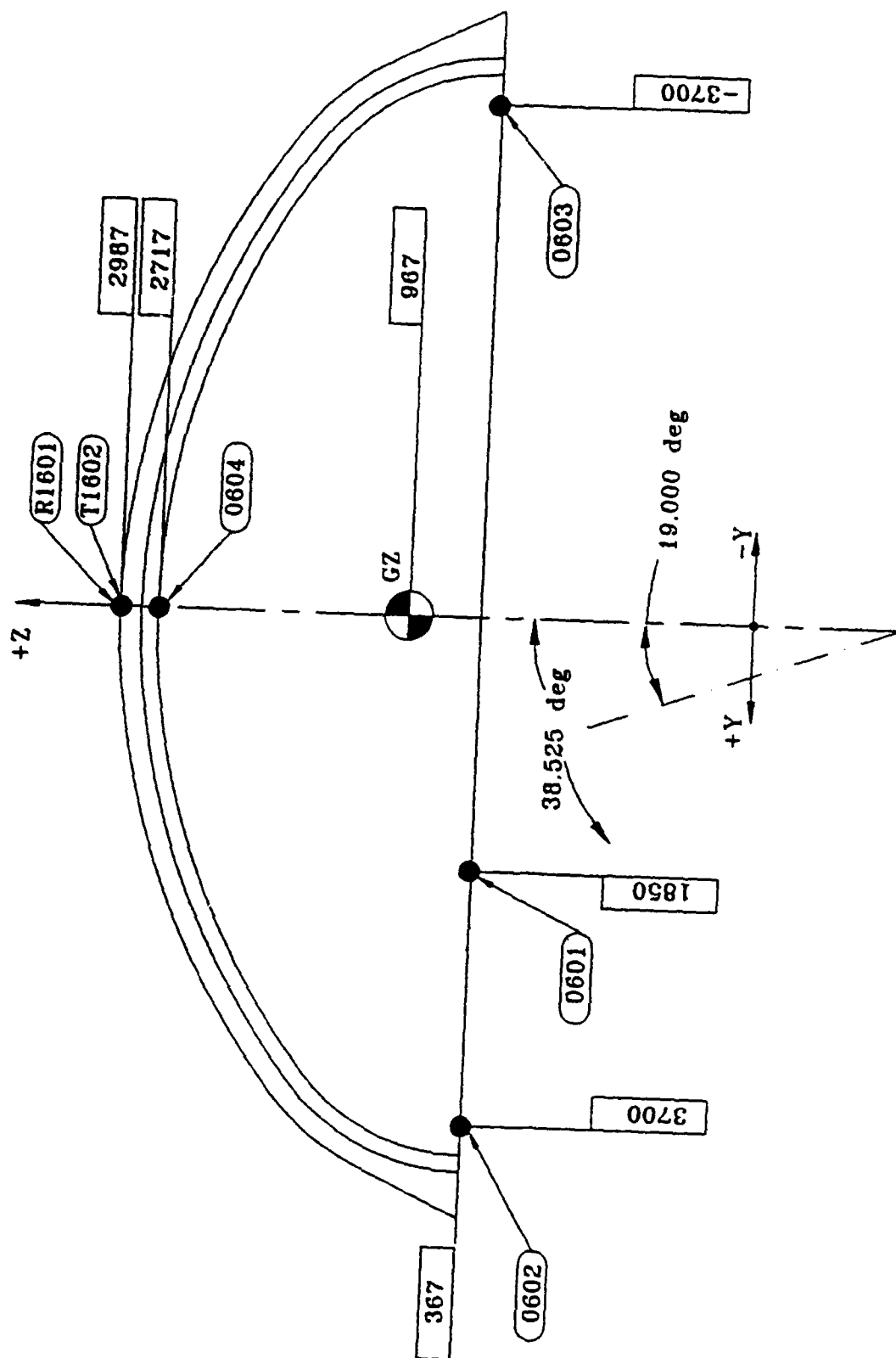


Figure B-4. Instrumentation on arch at X = 6818, PAS-3.

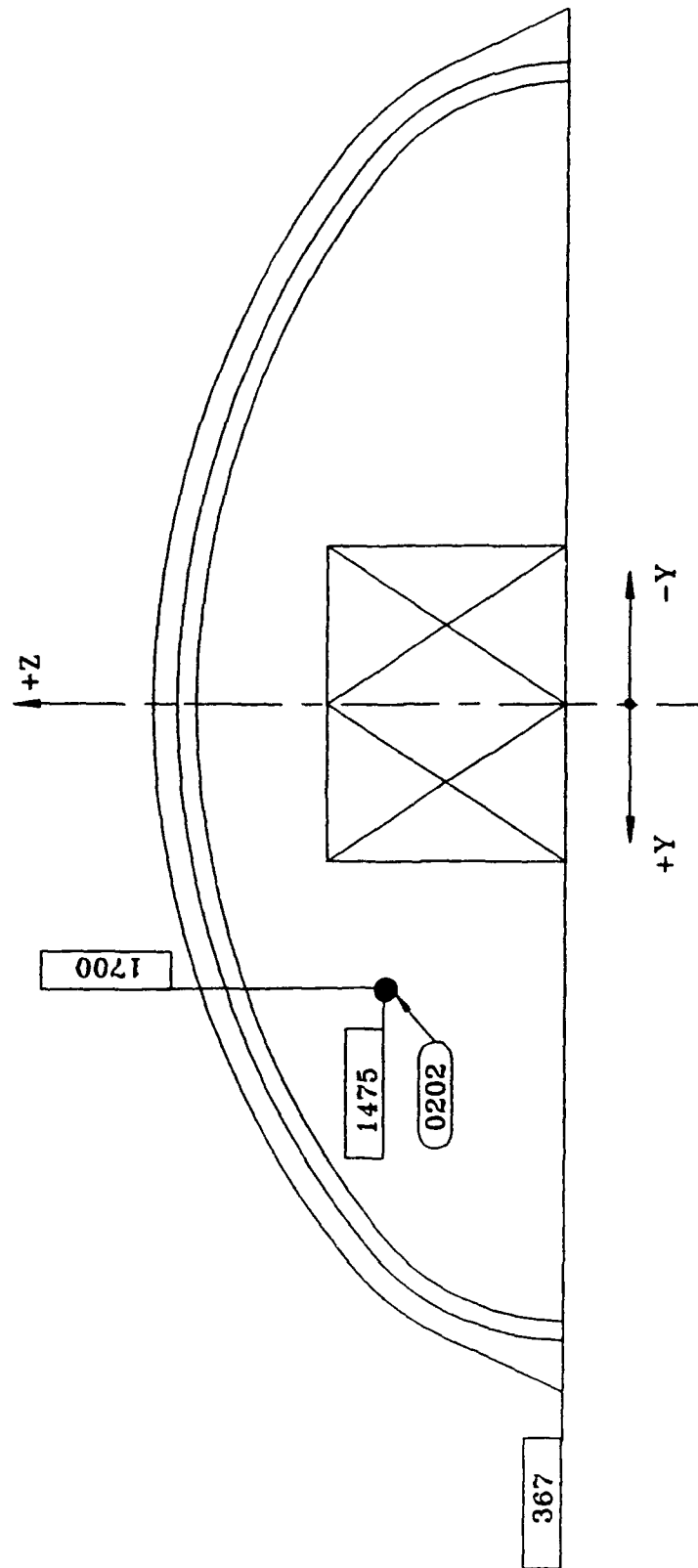
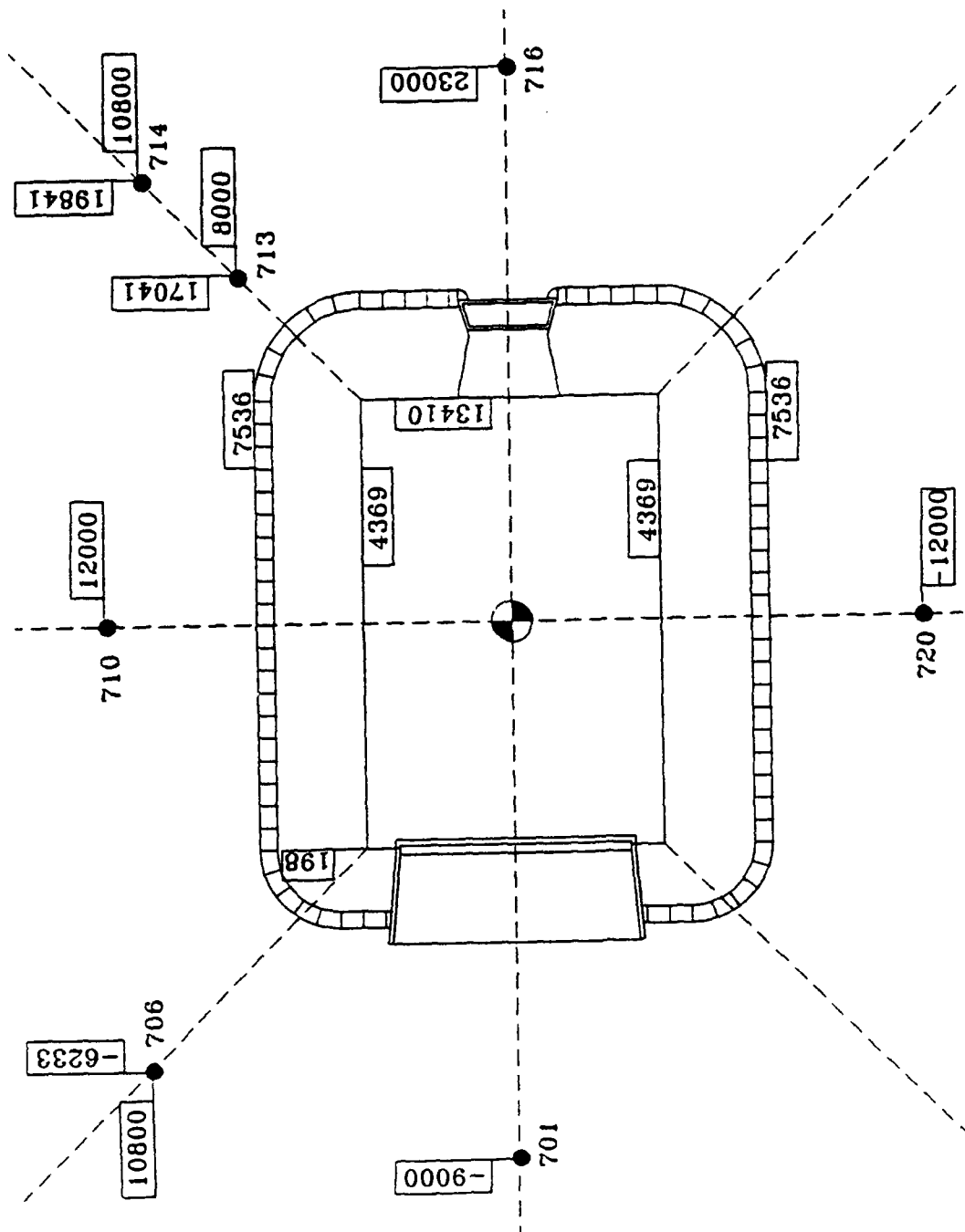
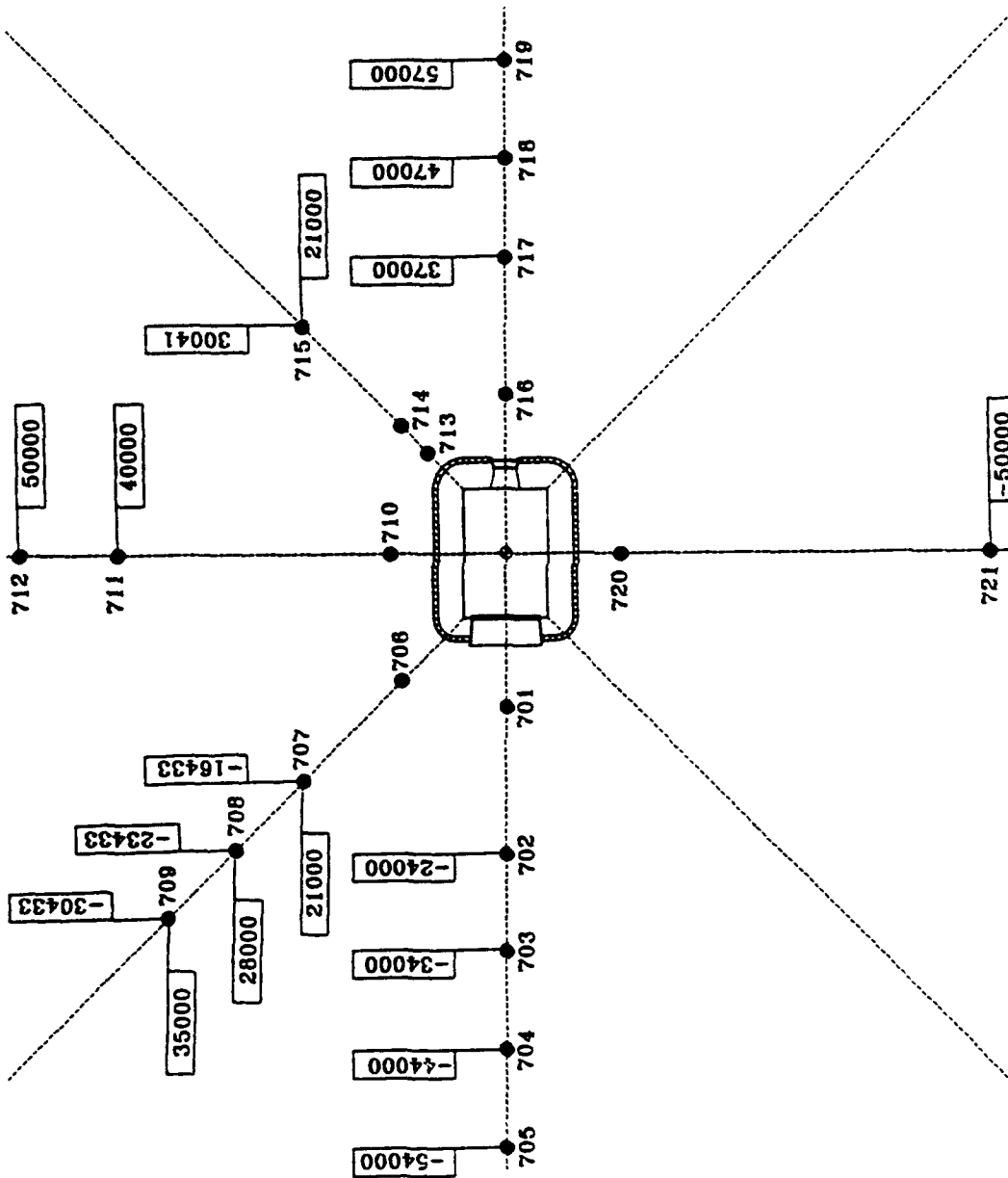


Figure B-5. Instrumentation on inner surface of backwall at X = 13010, PAS-3.



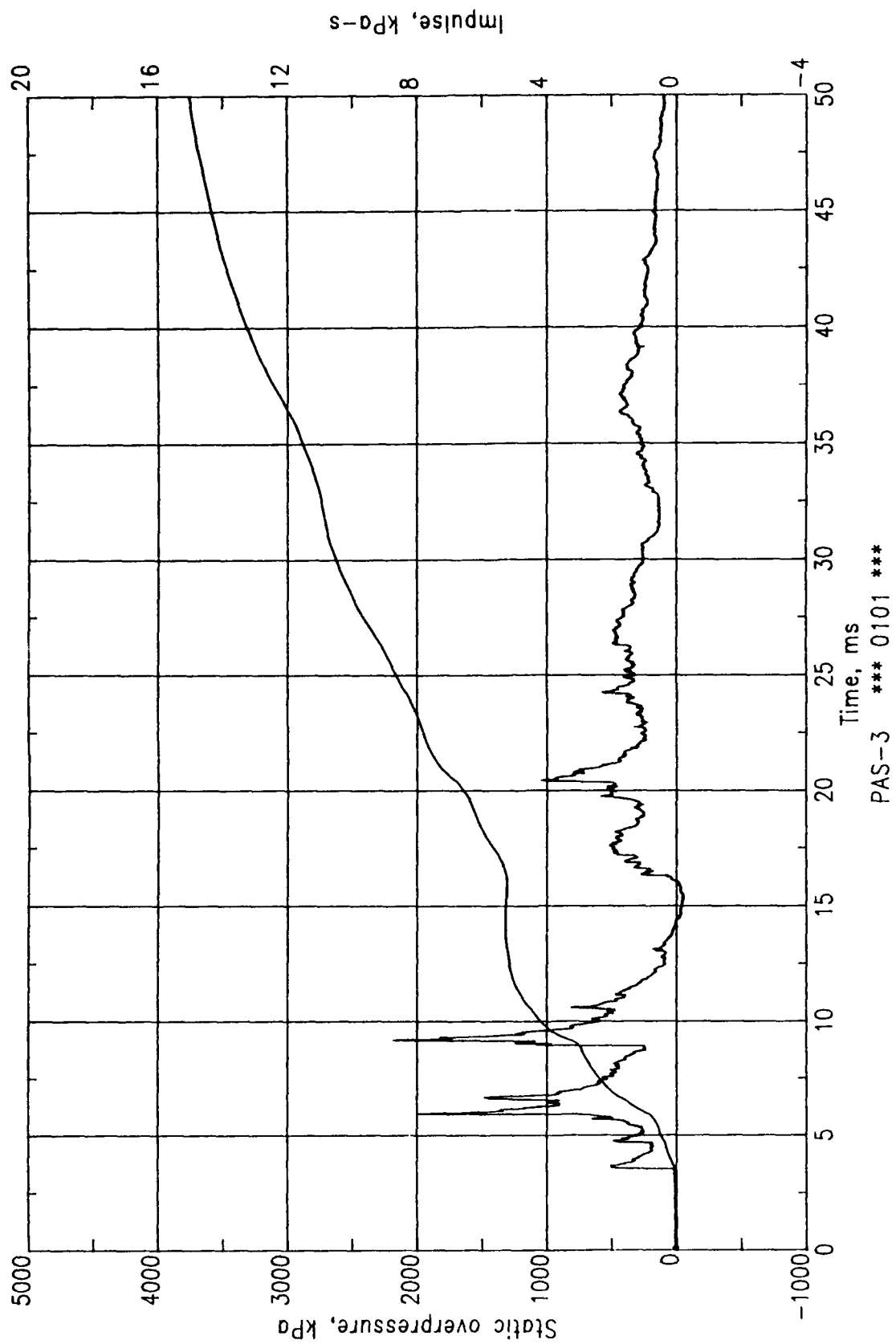
(a) Near free-field.

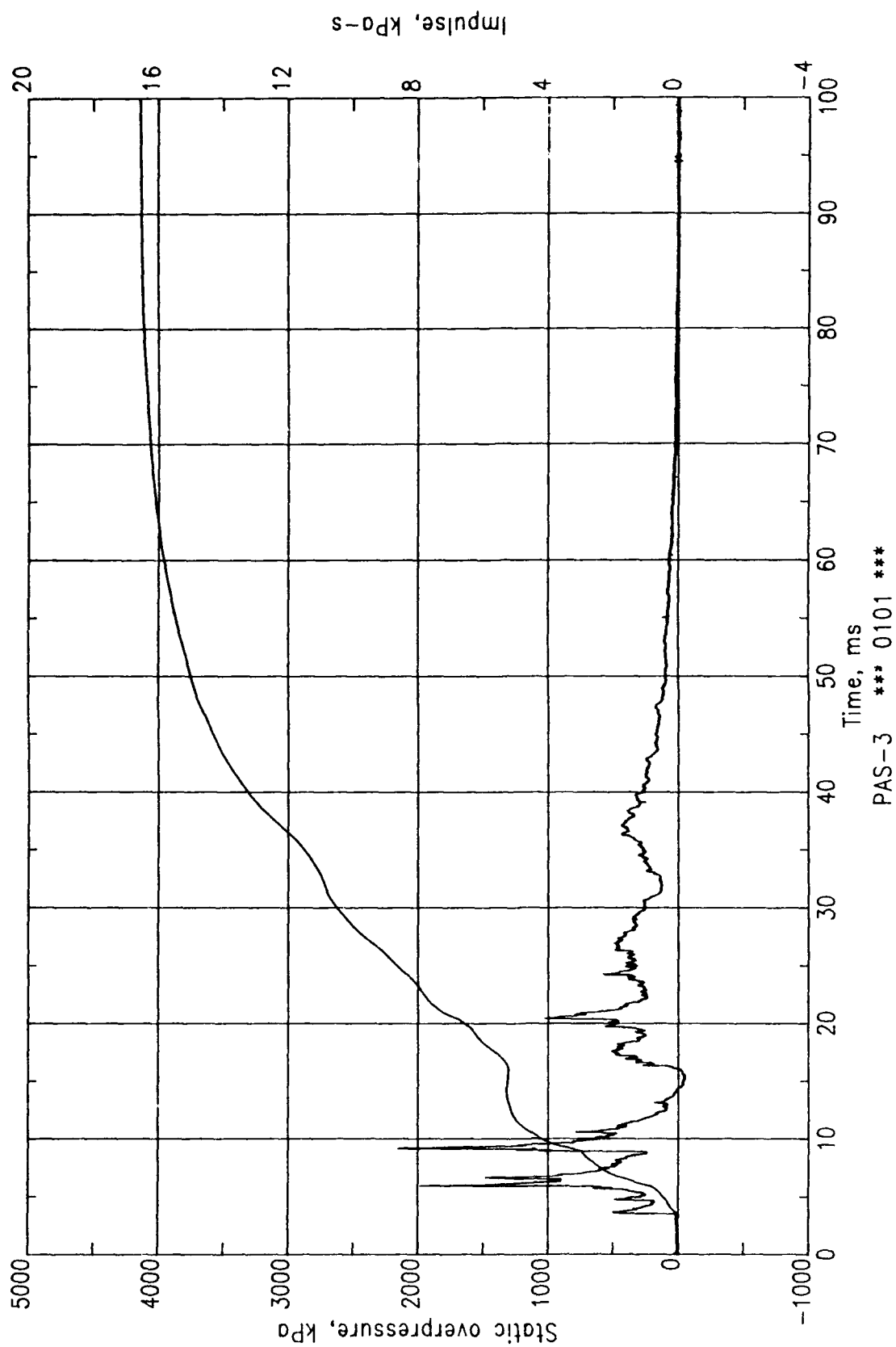
Figure B-6. Free-field airblast gage locations, PAS-3.

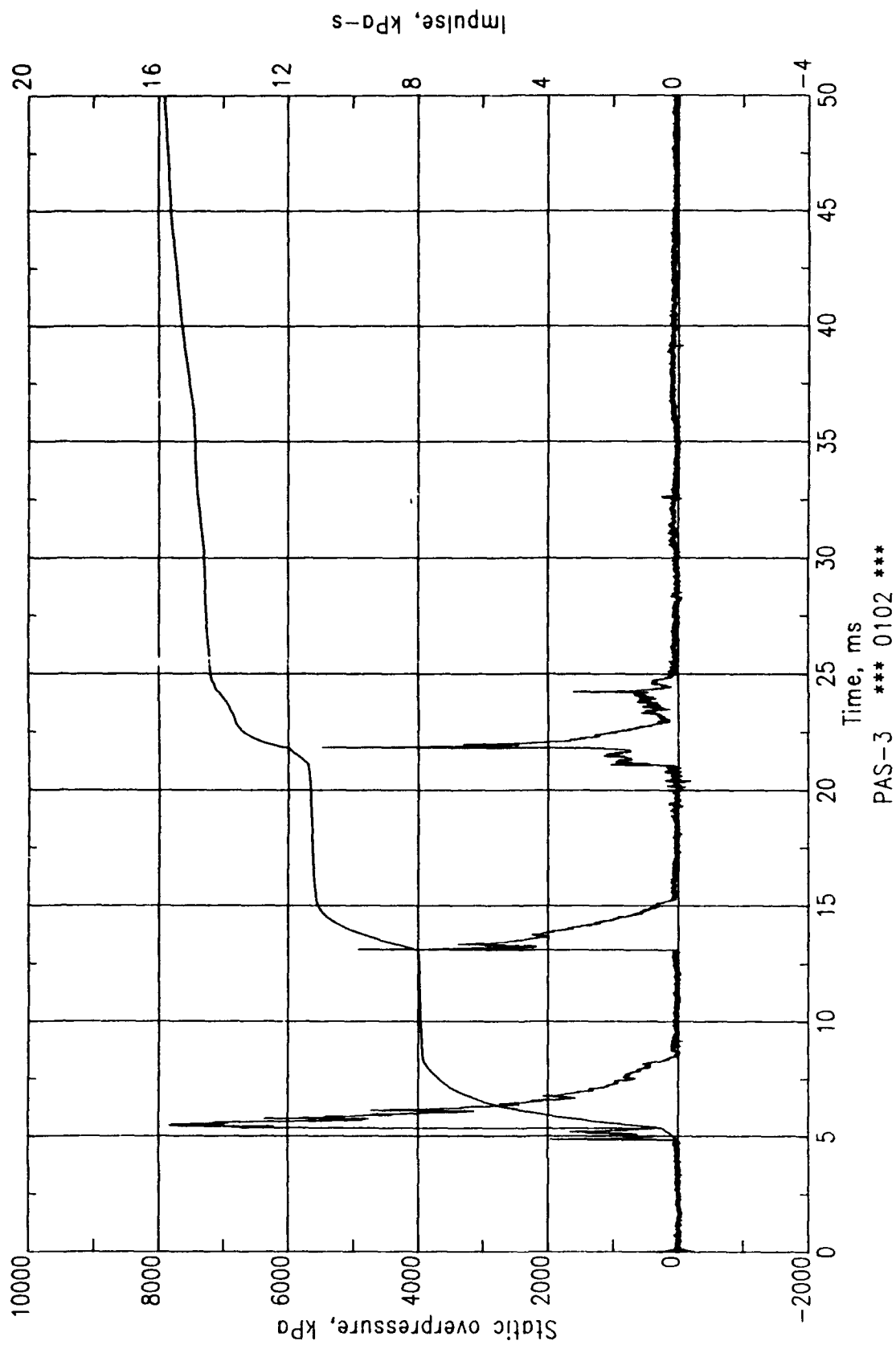


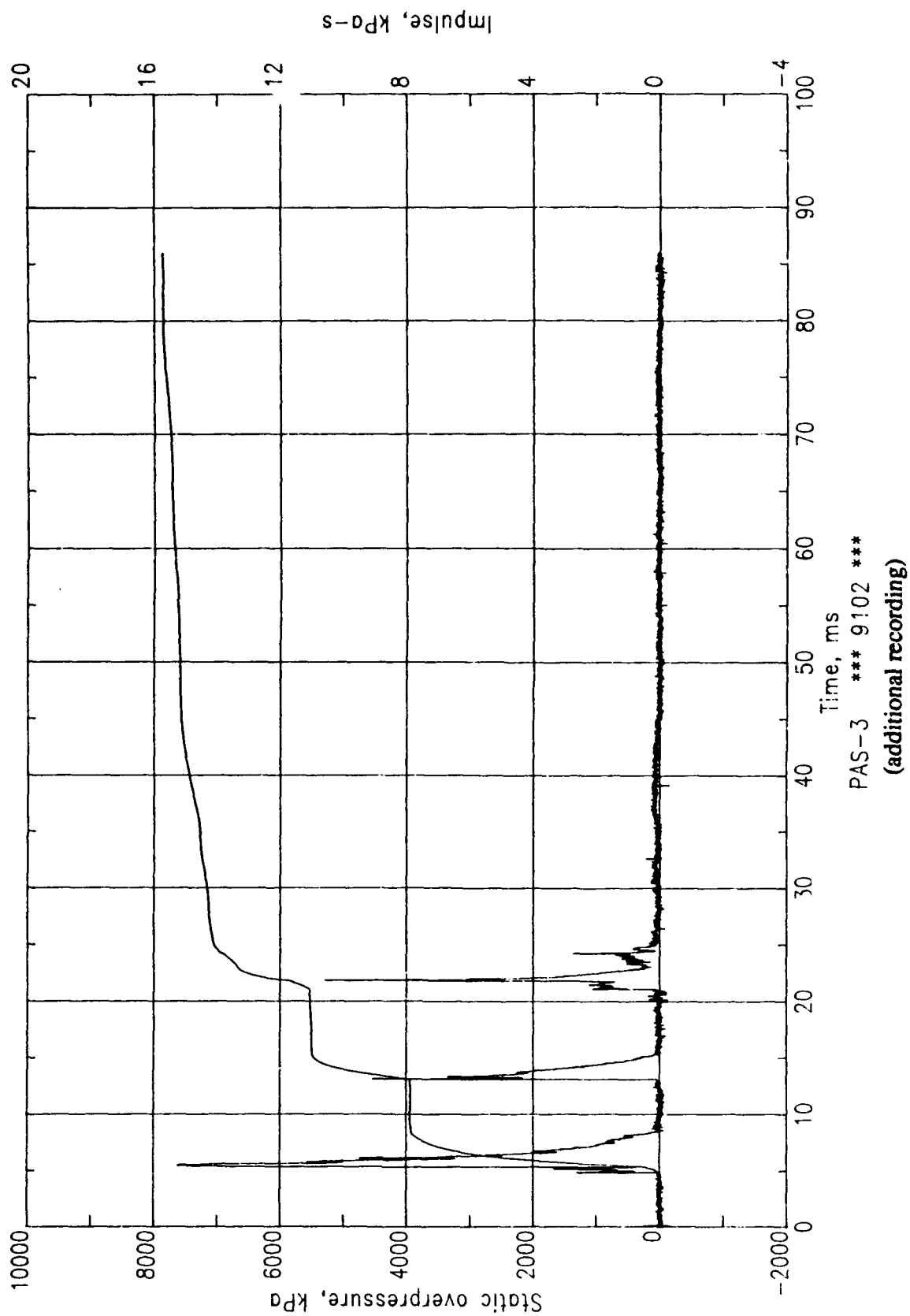
(b) Far free-field.

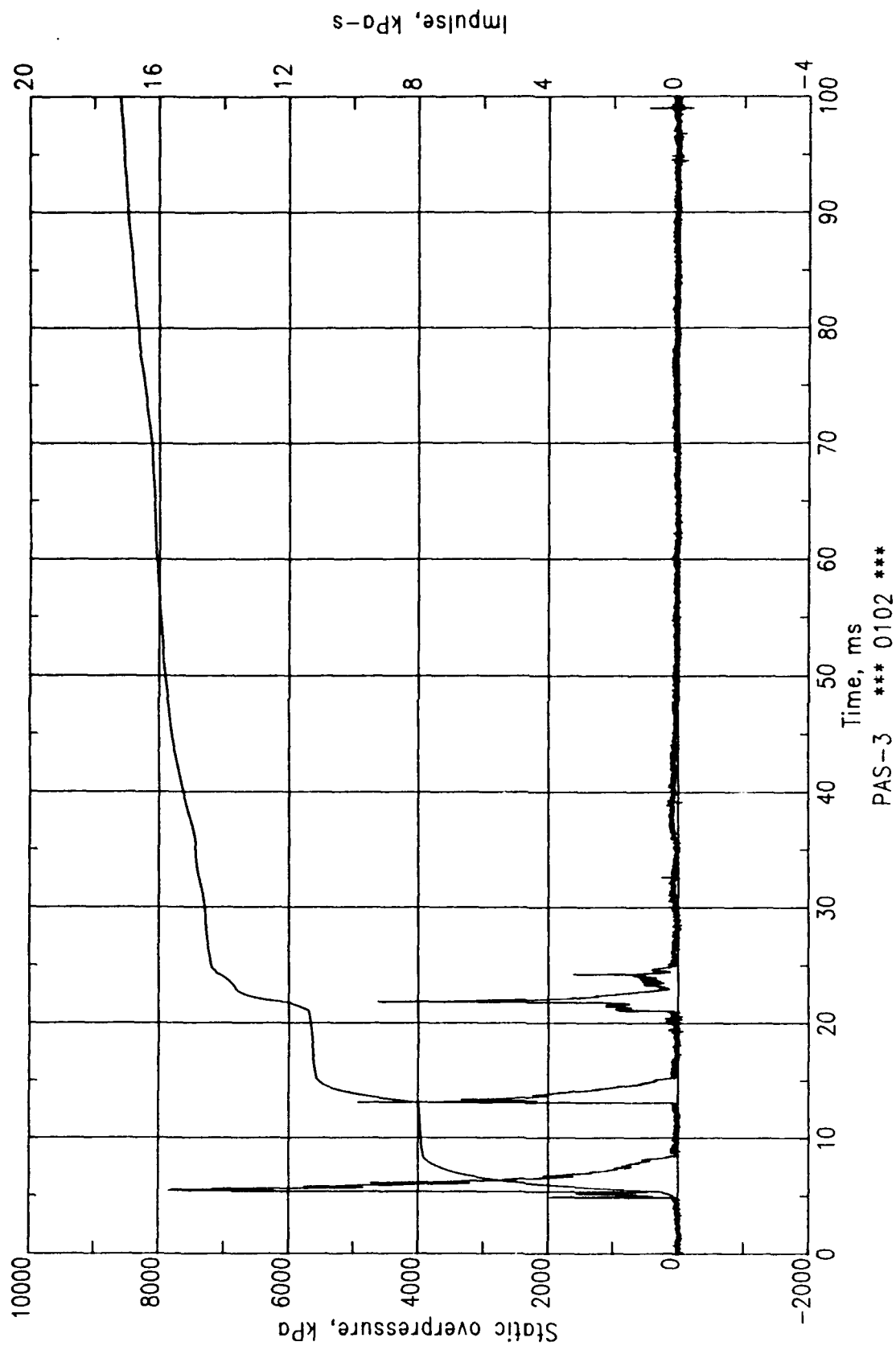
Figure 6. Concluded.

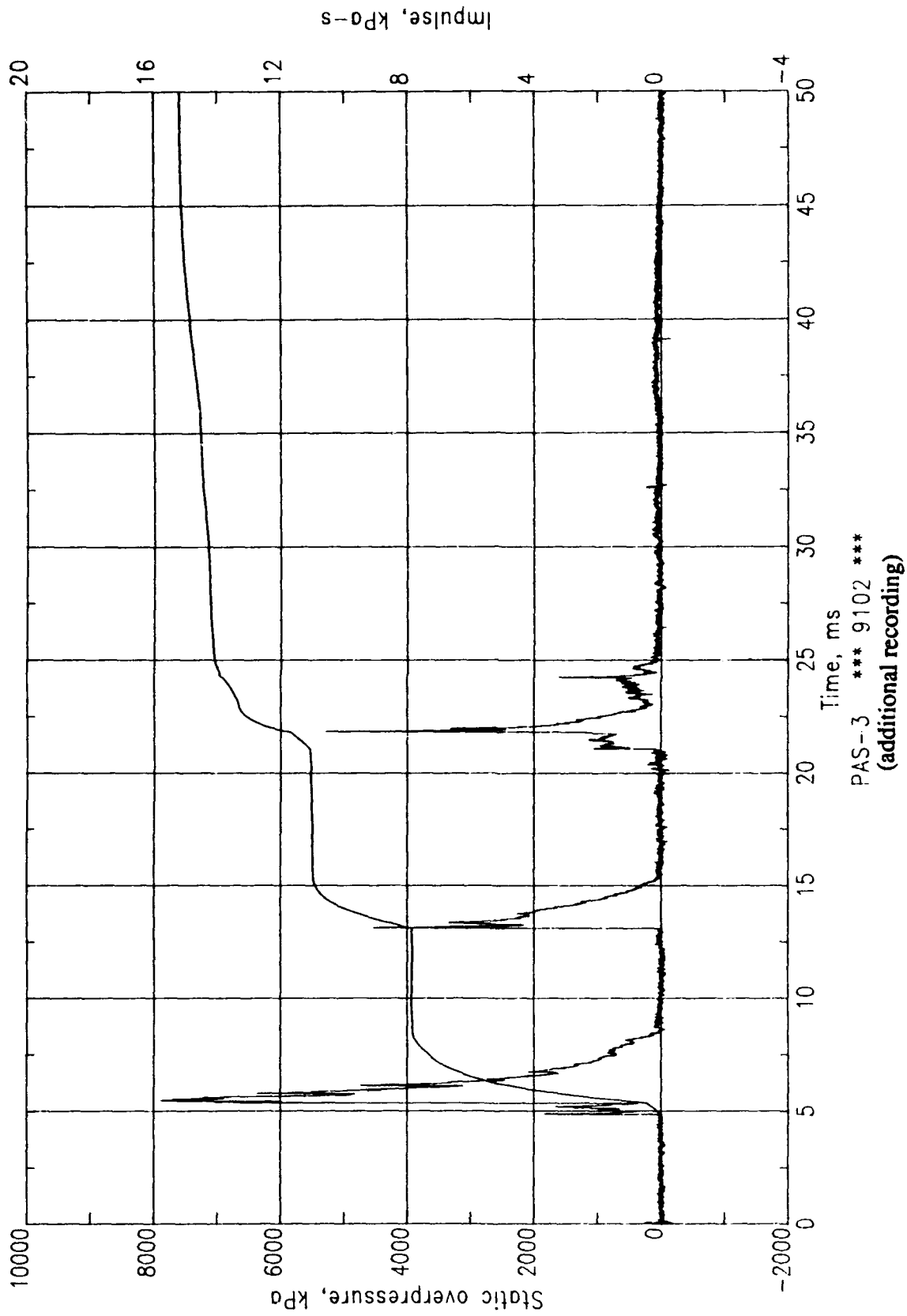


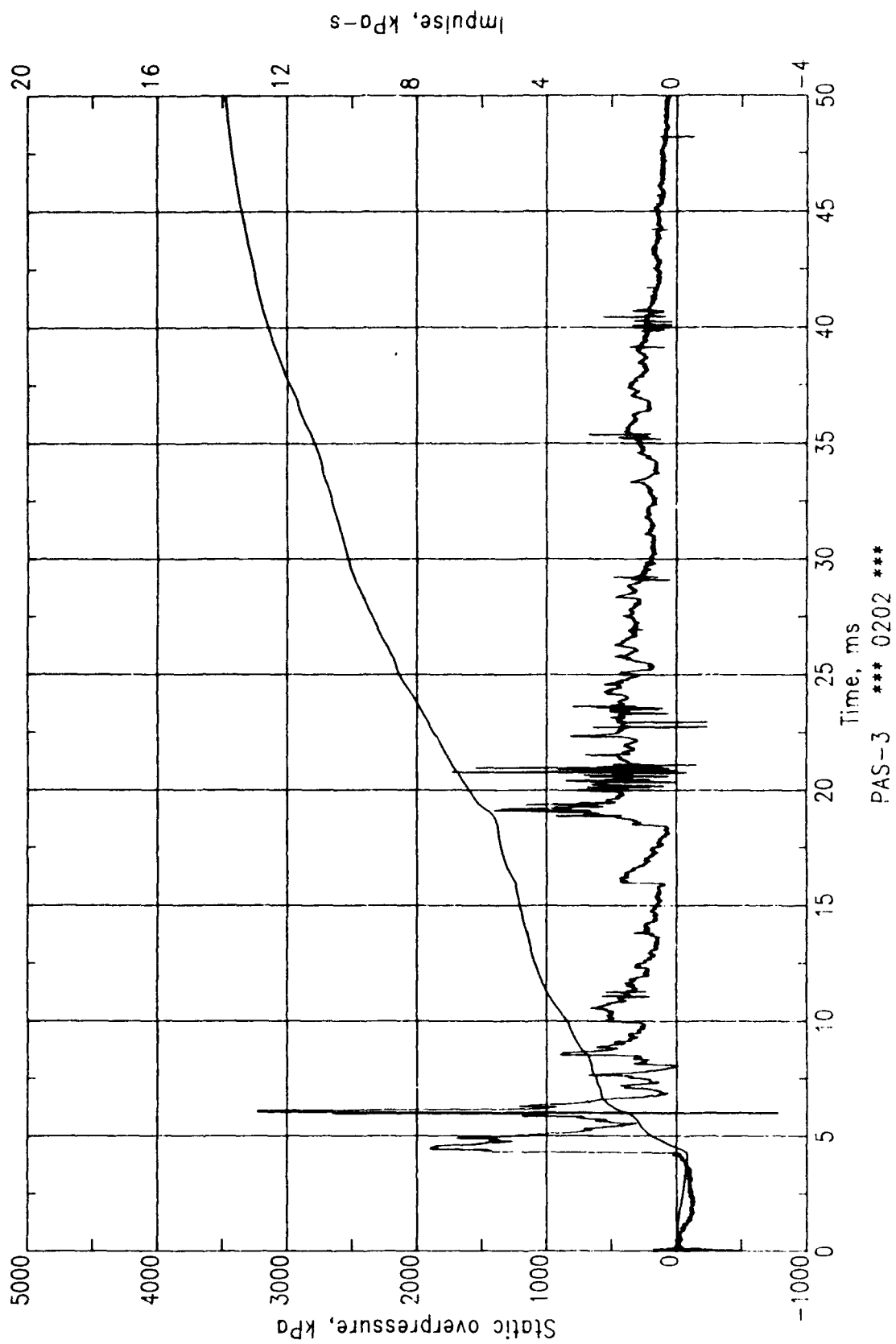


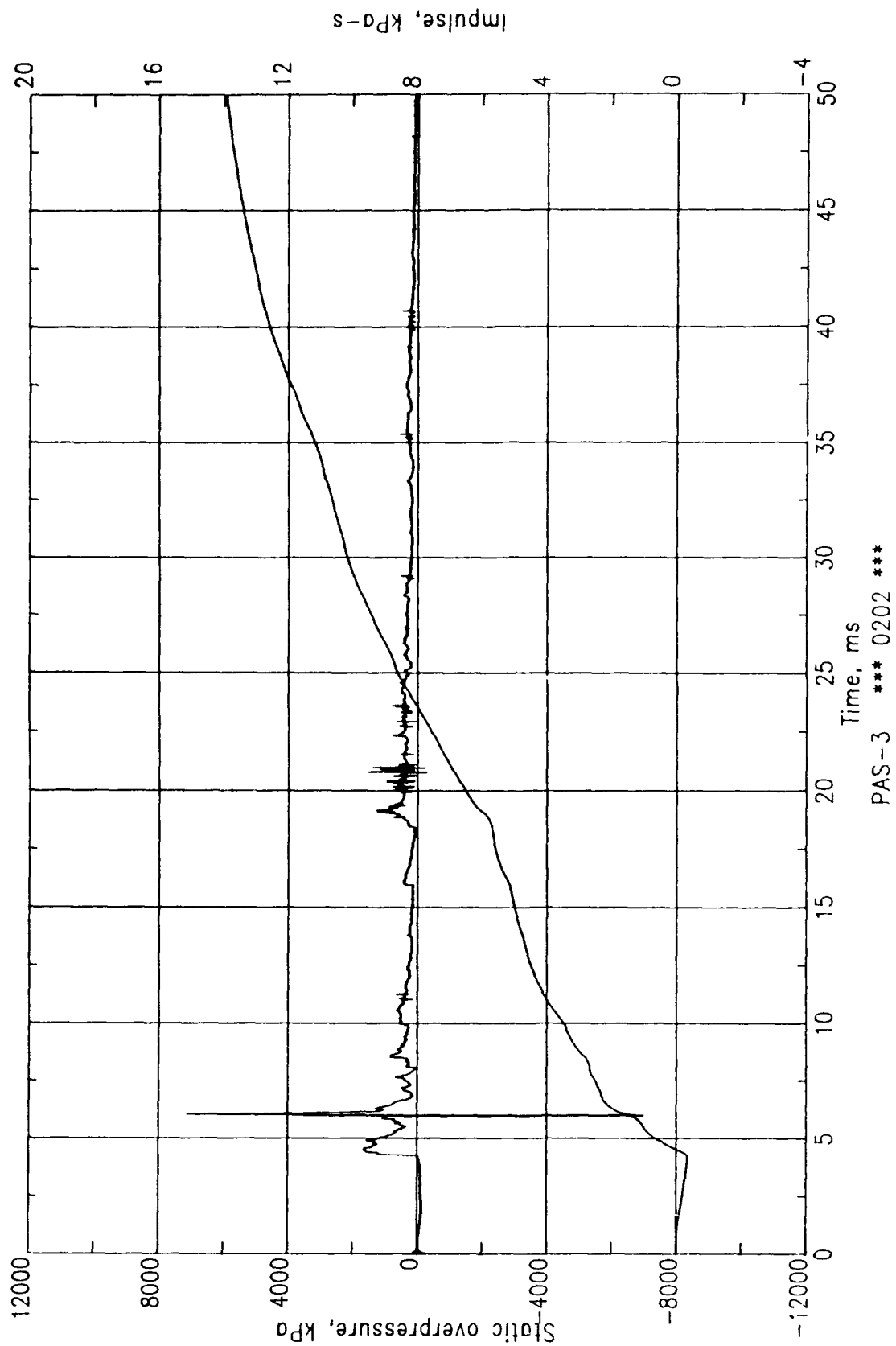


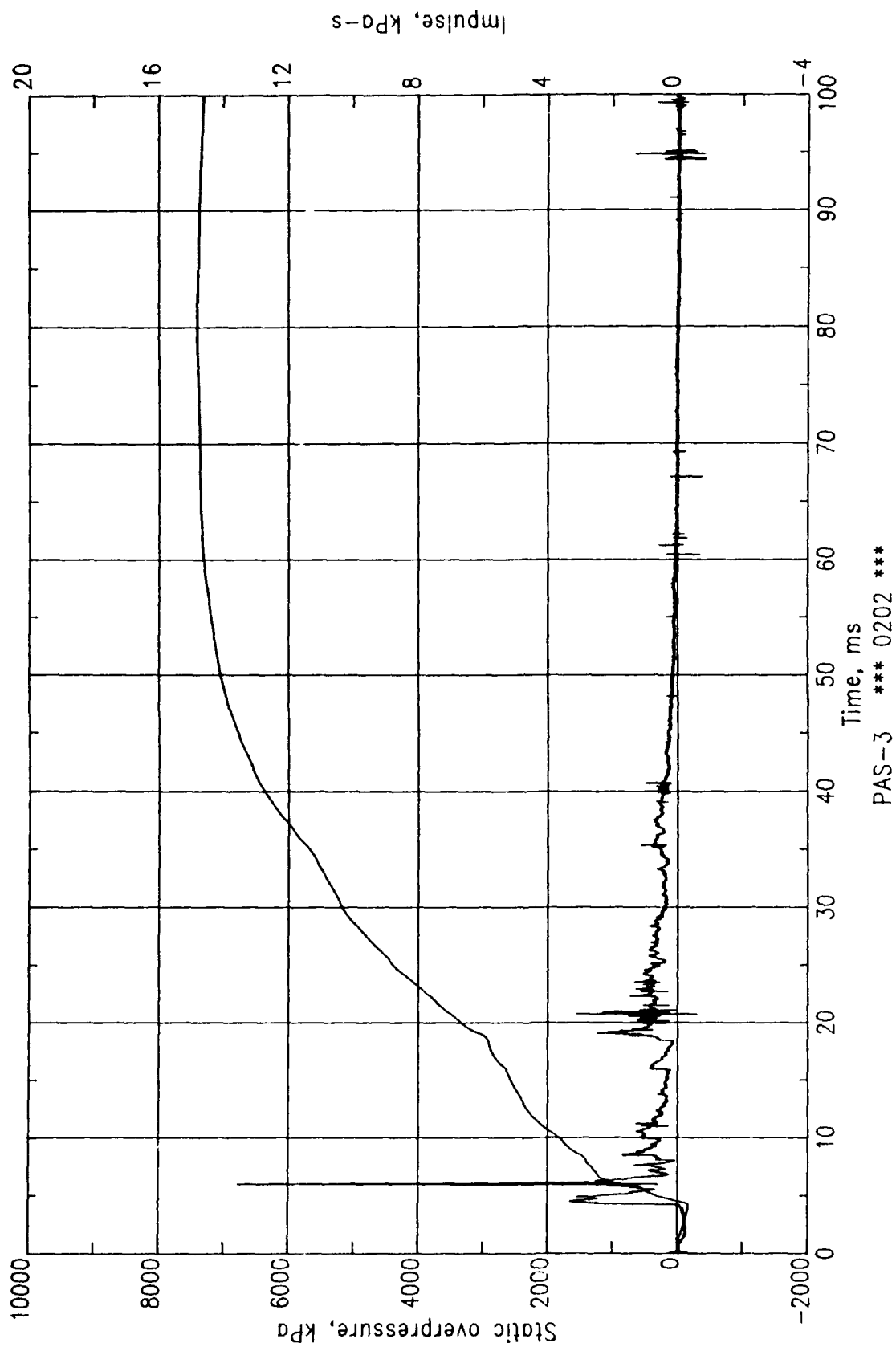


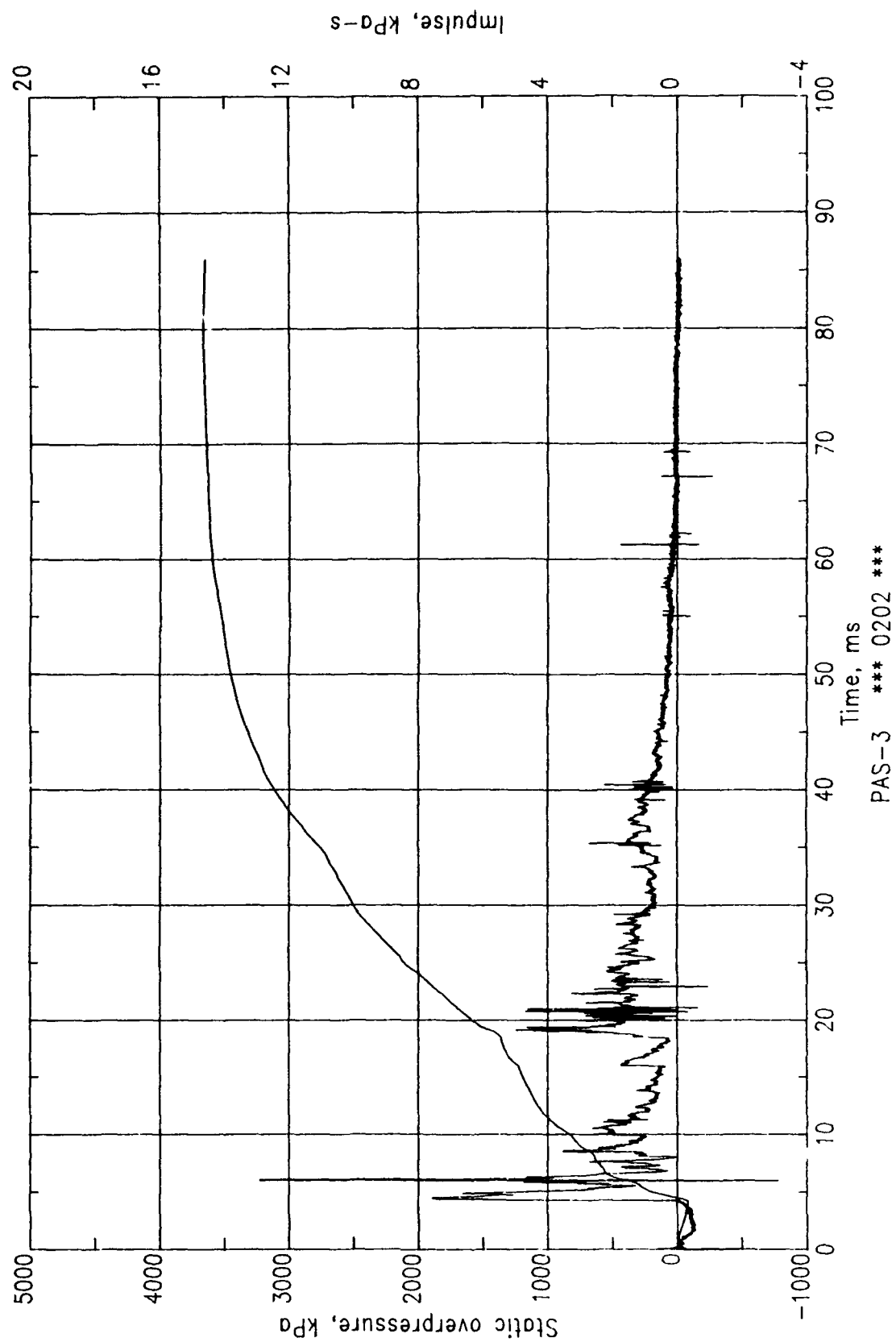


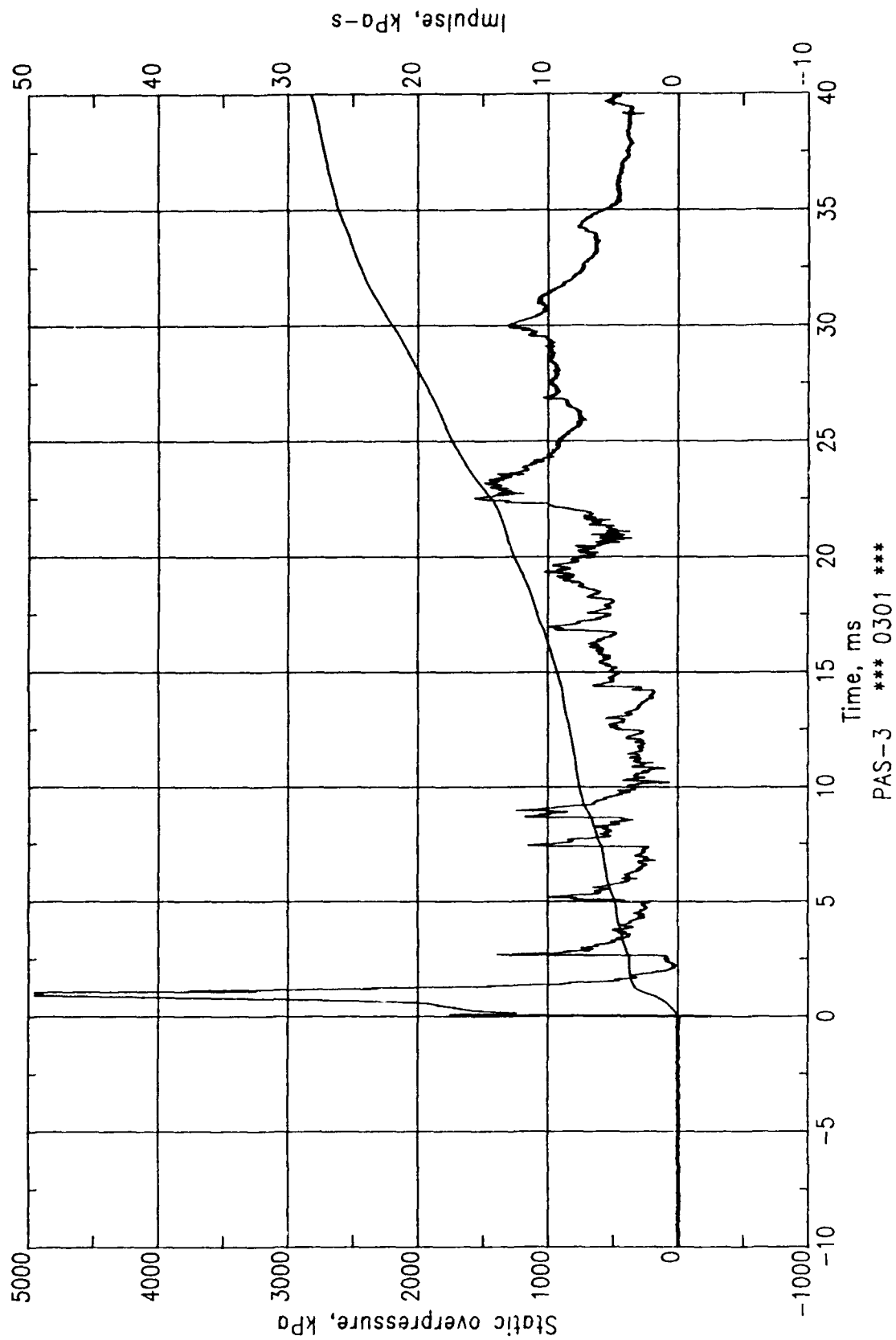


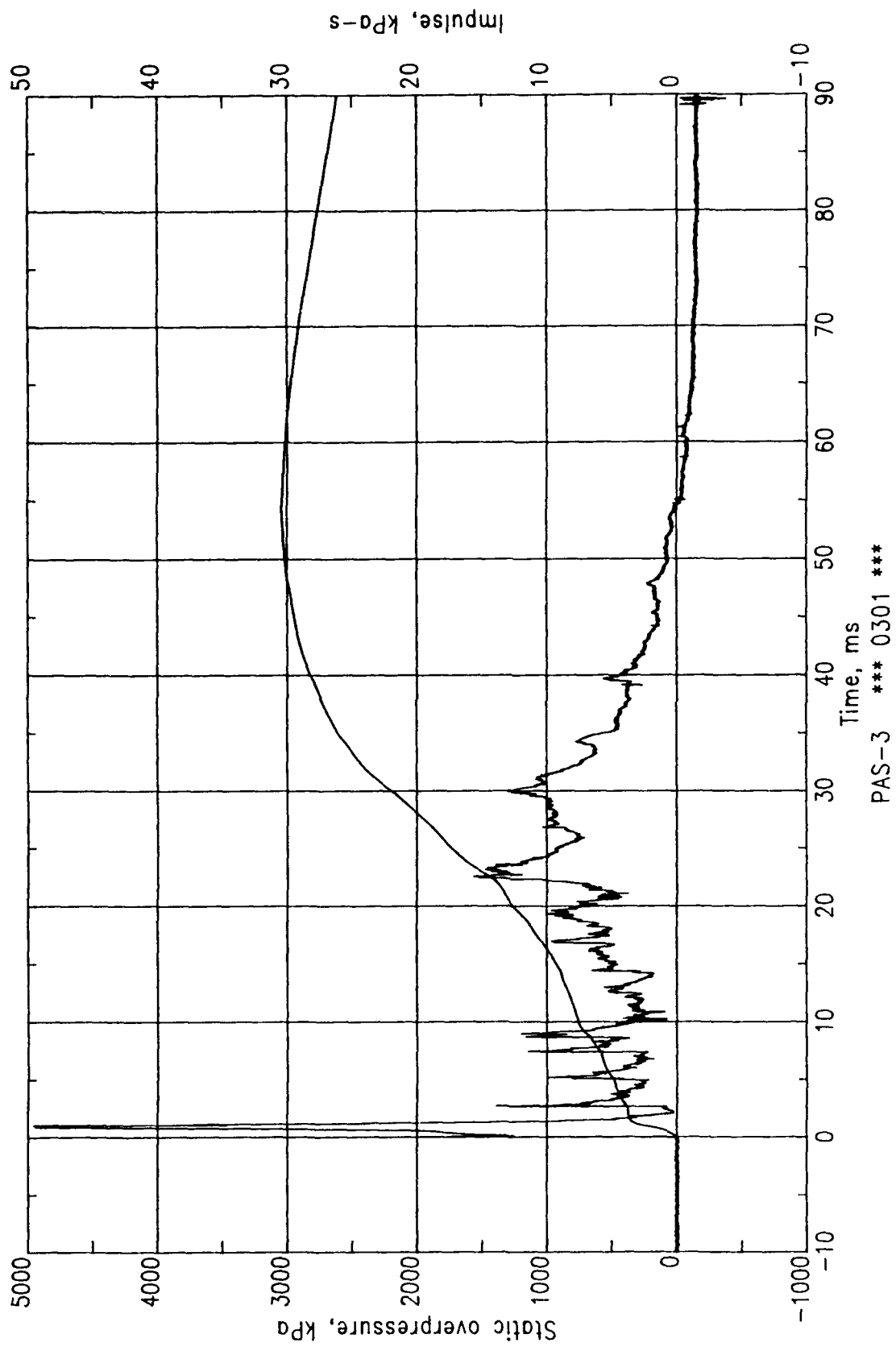


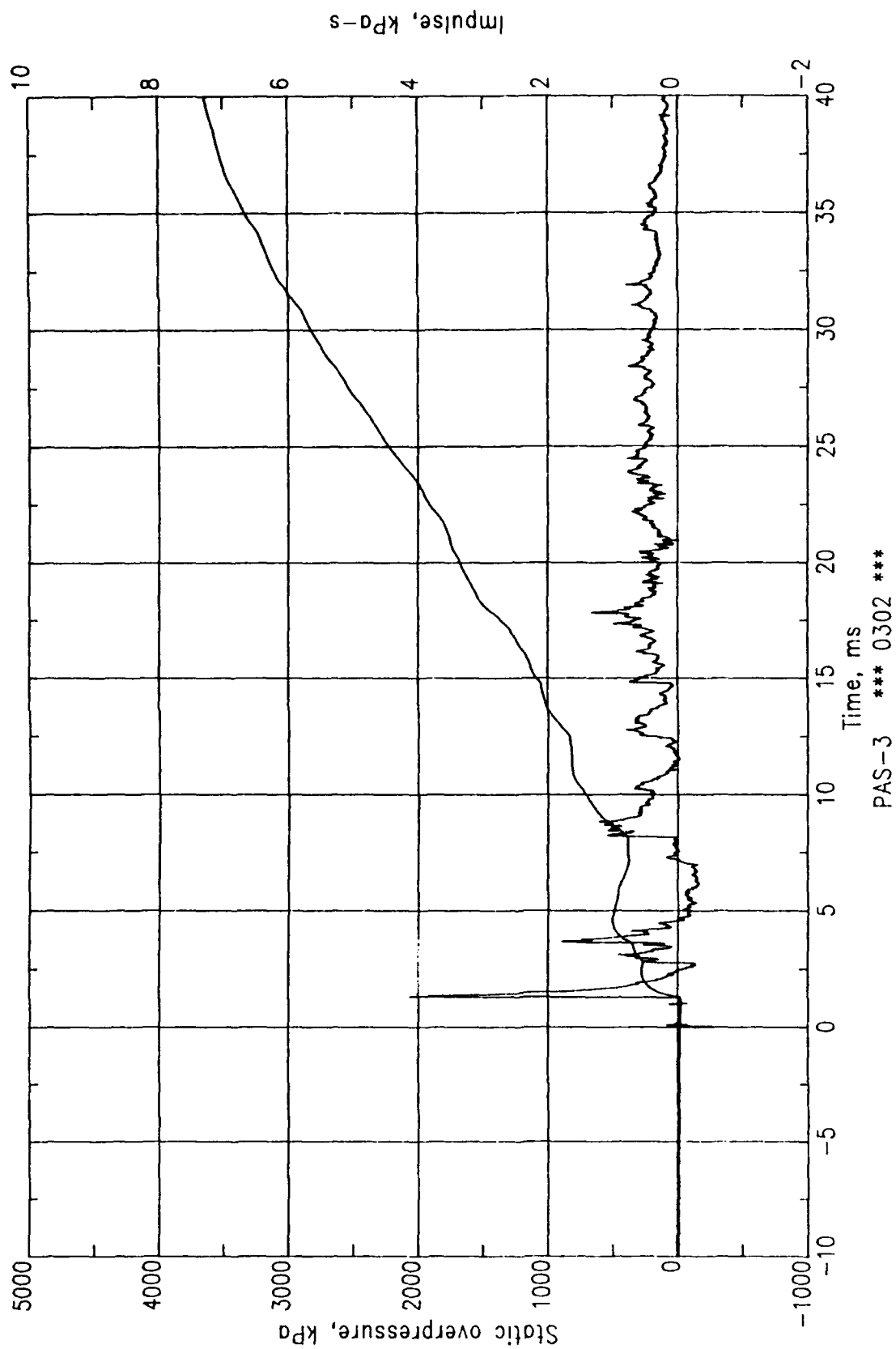


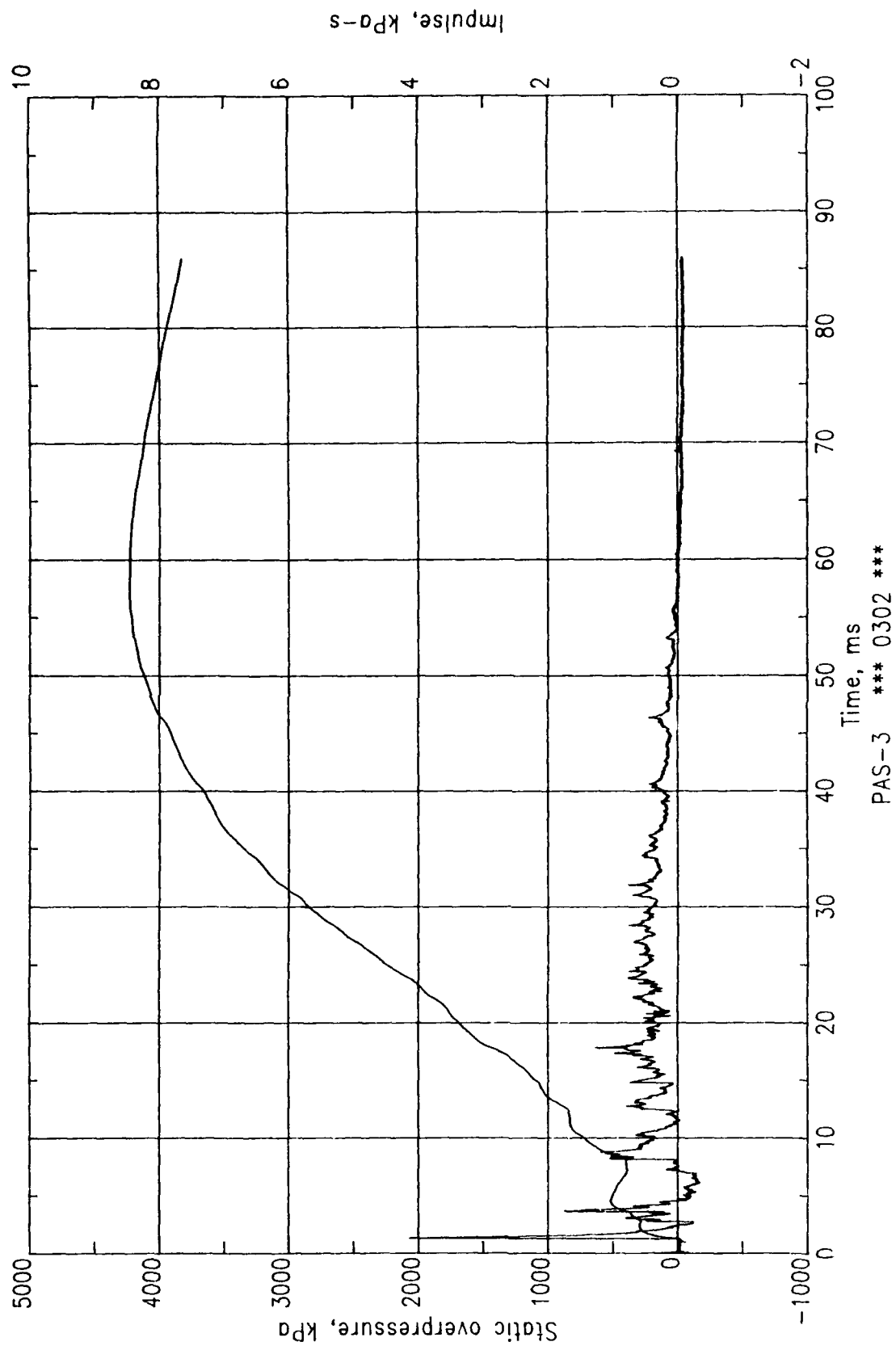


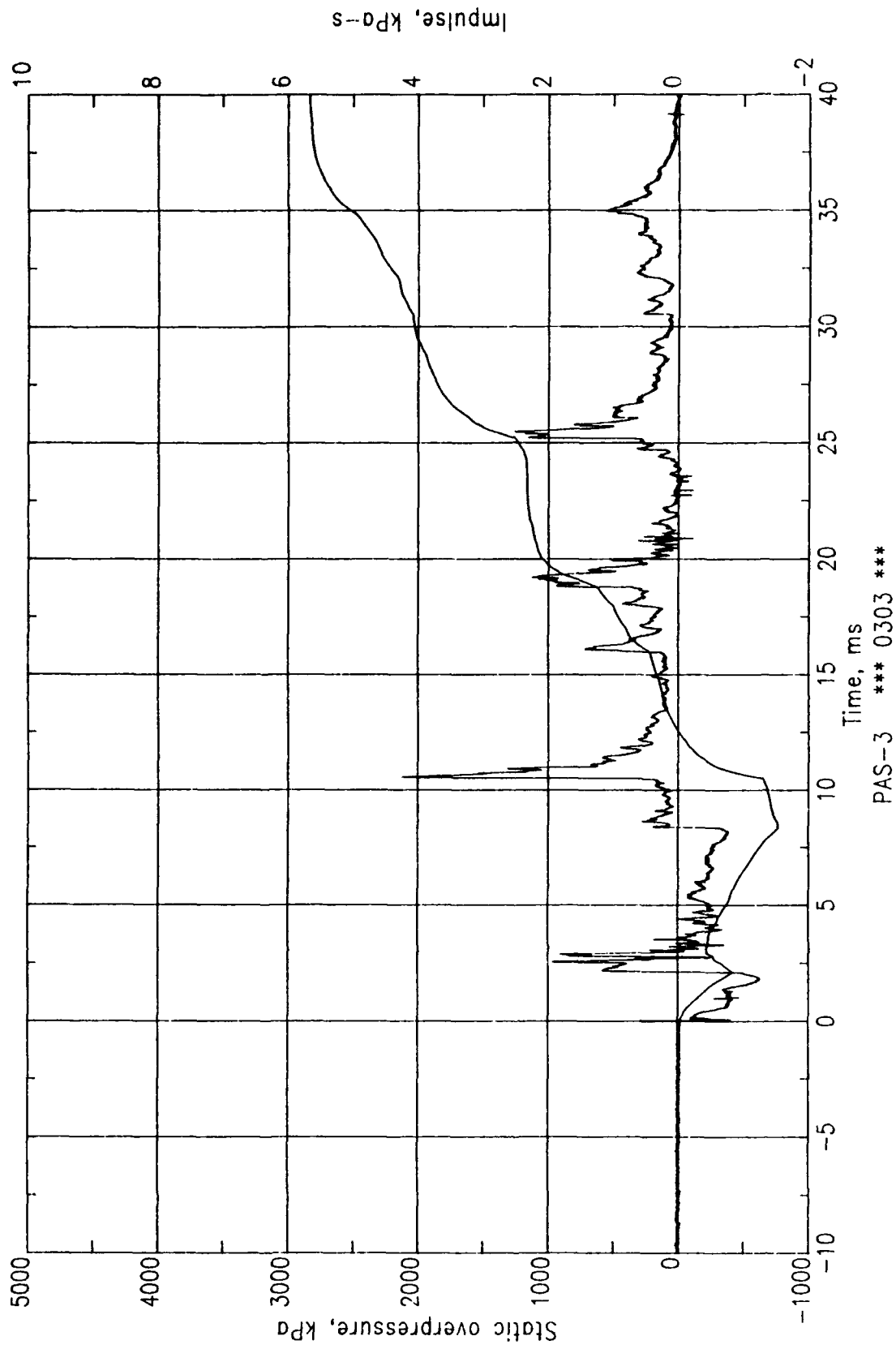


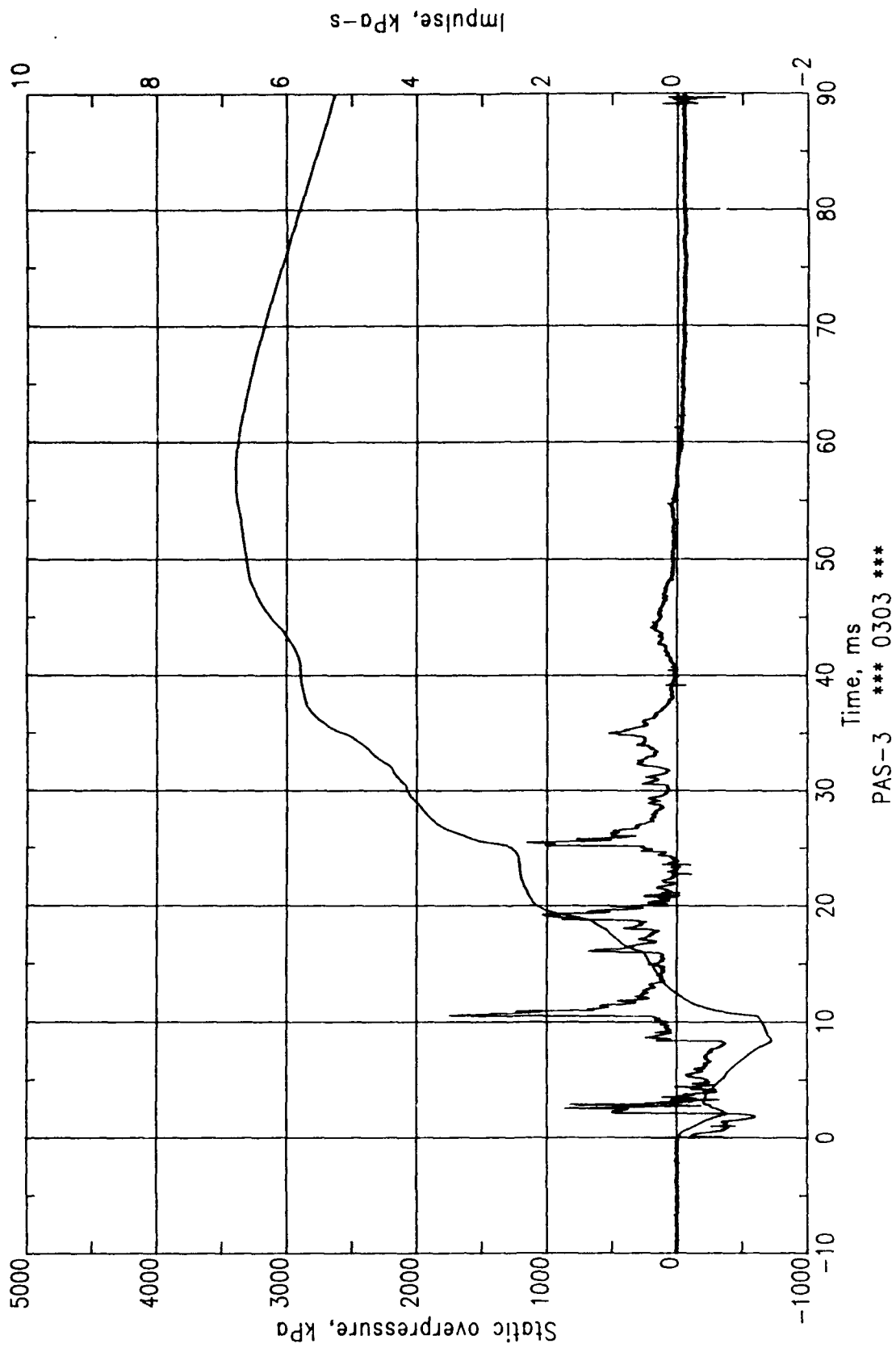




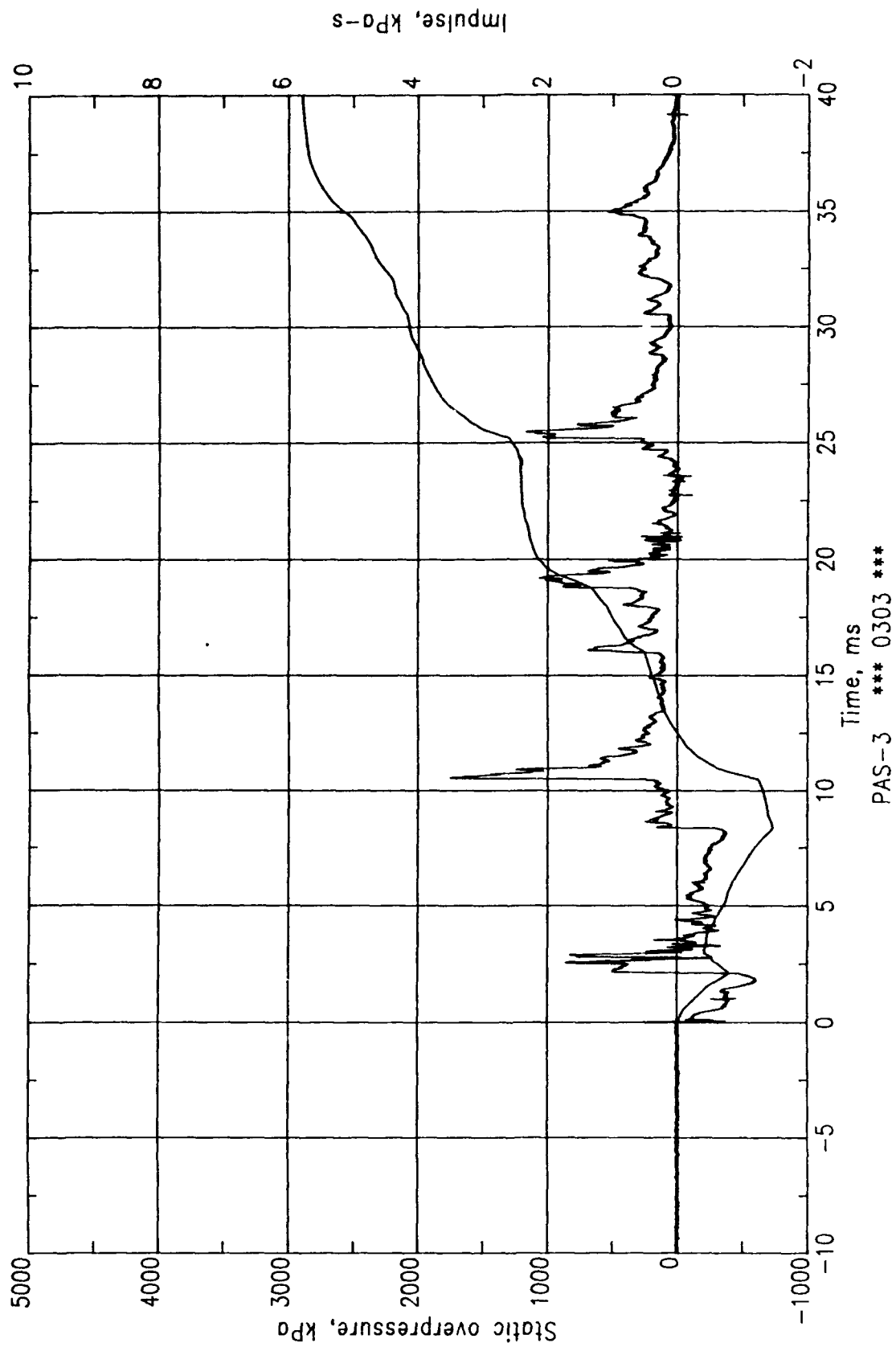


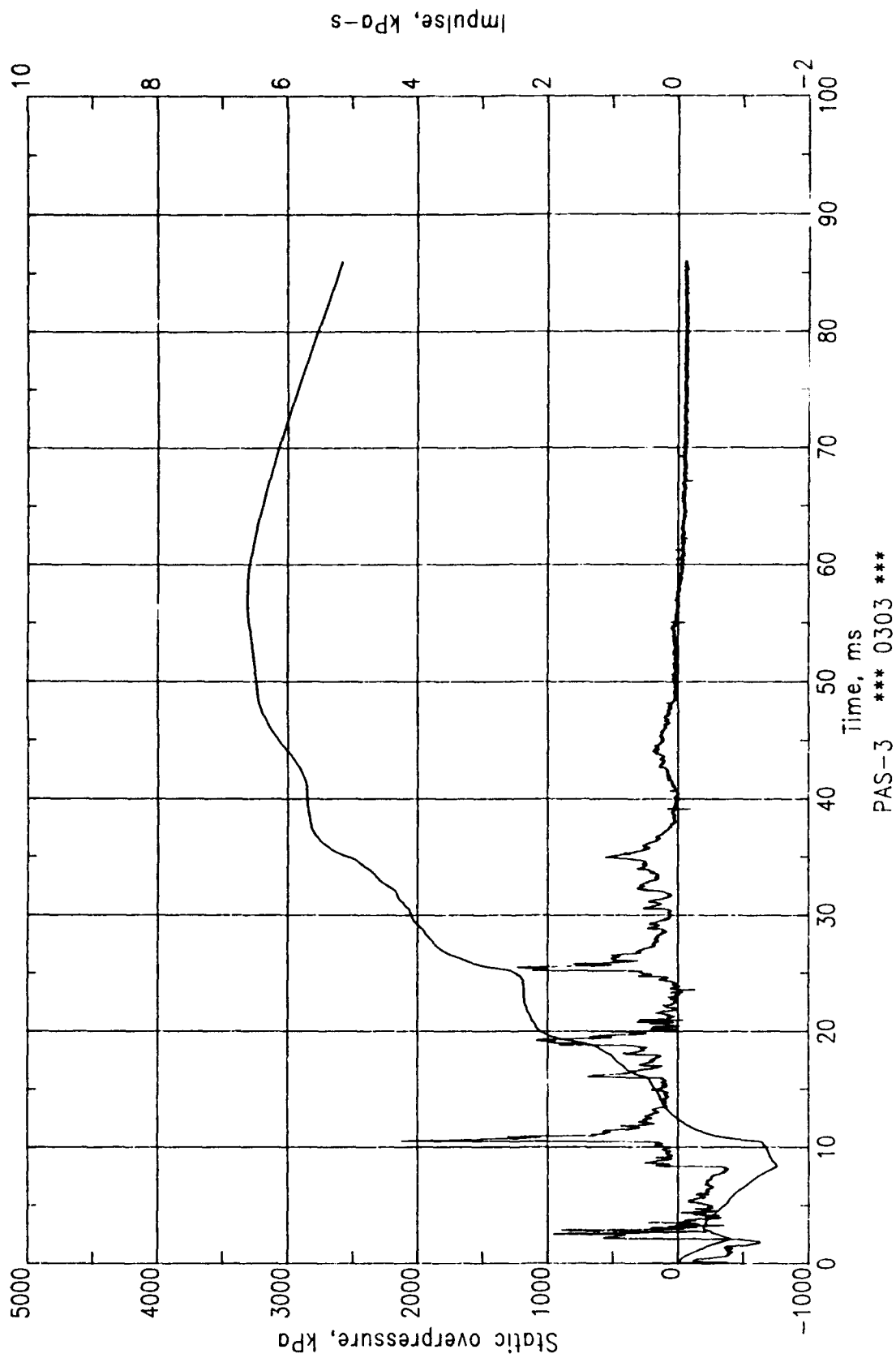


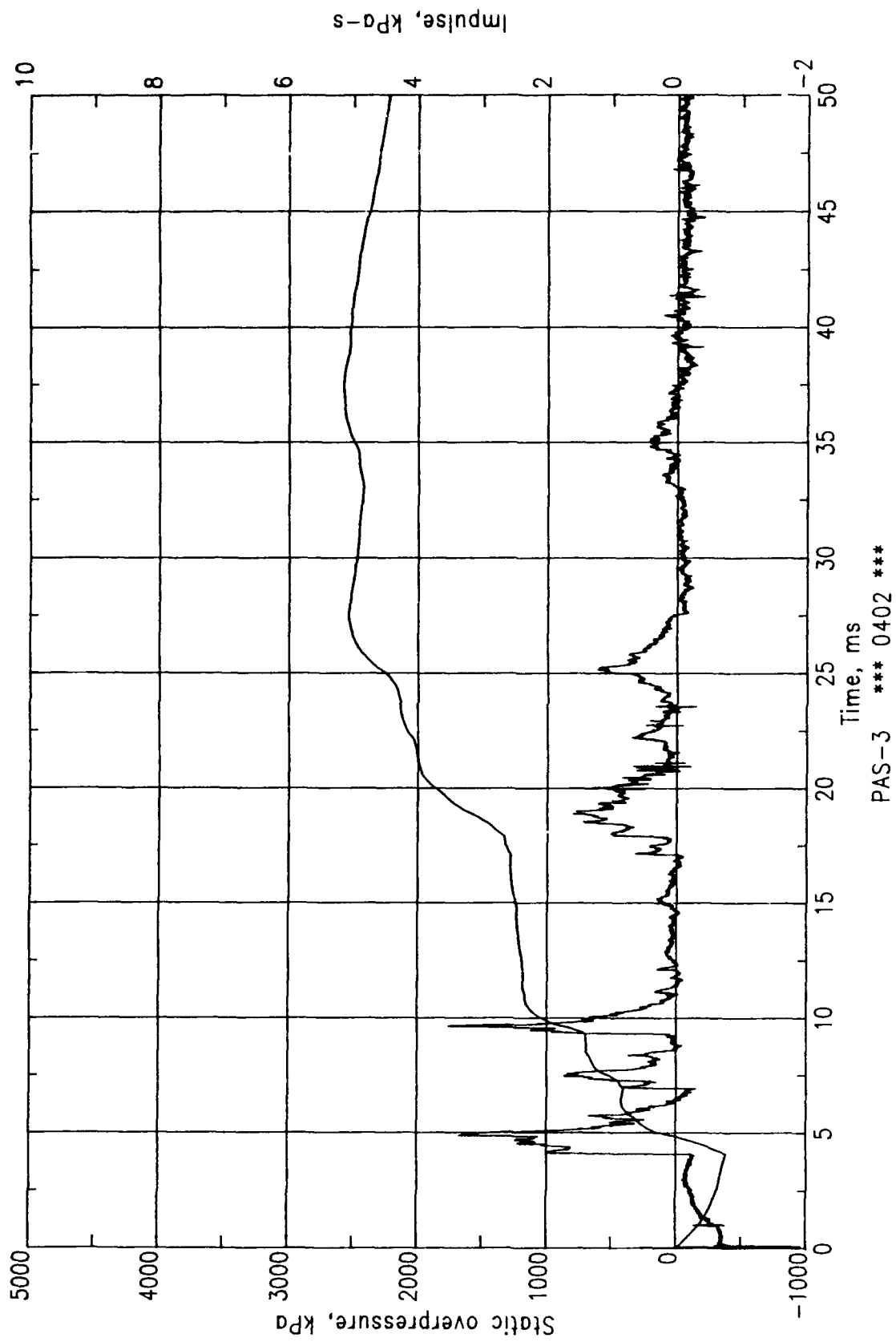


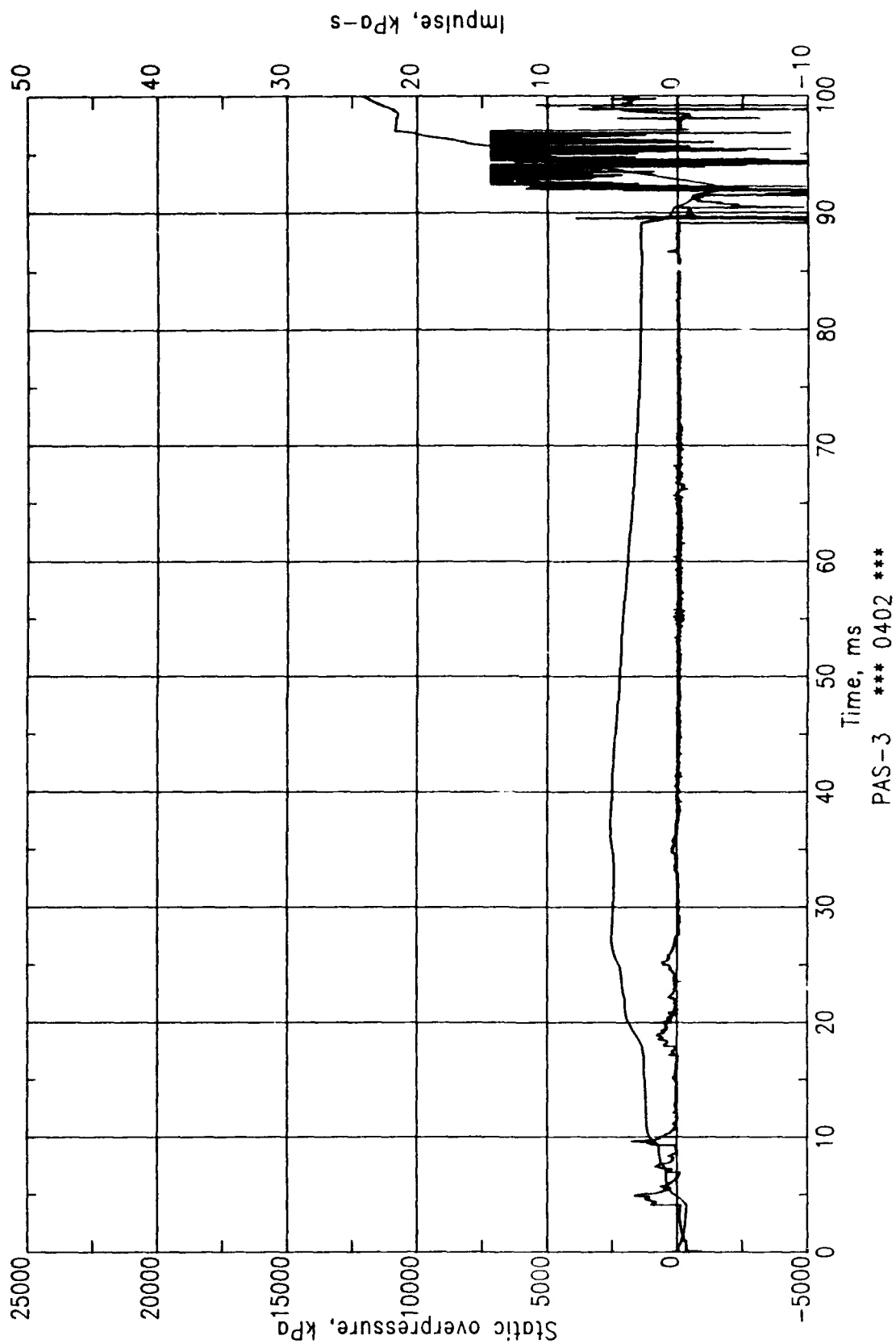


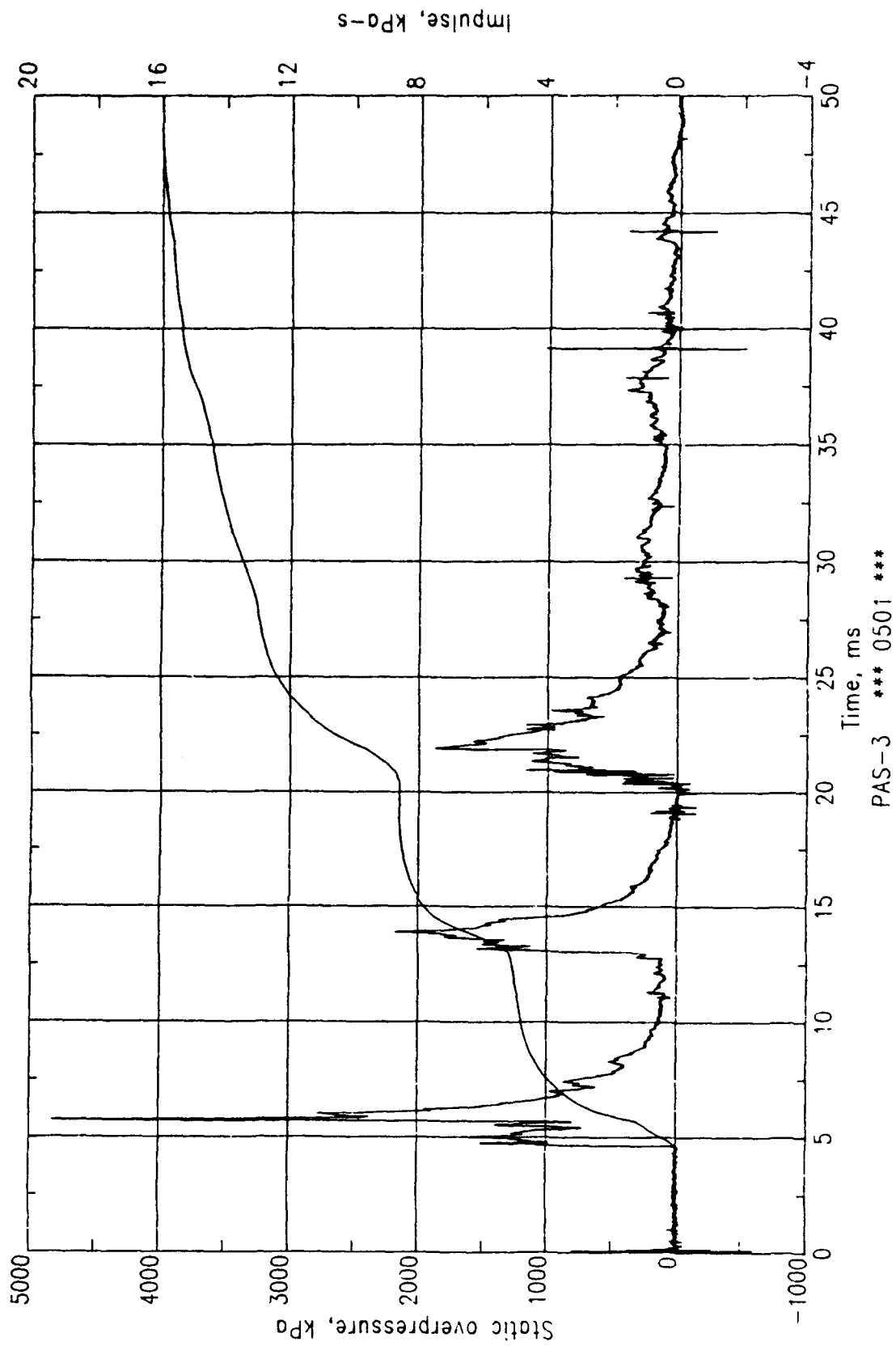
PAS-3 *** 0303 ***

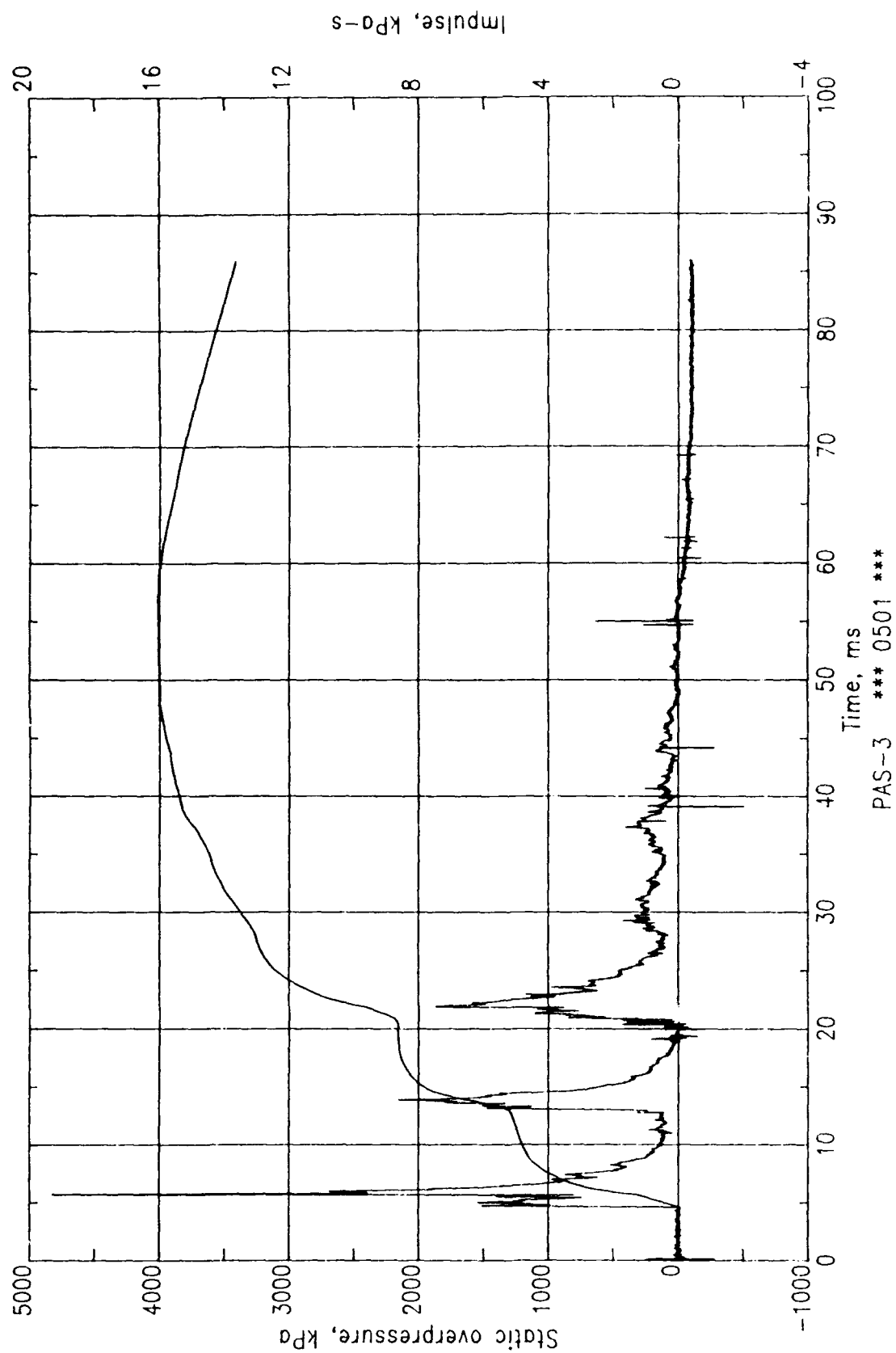


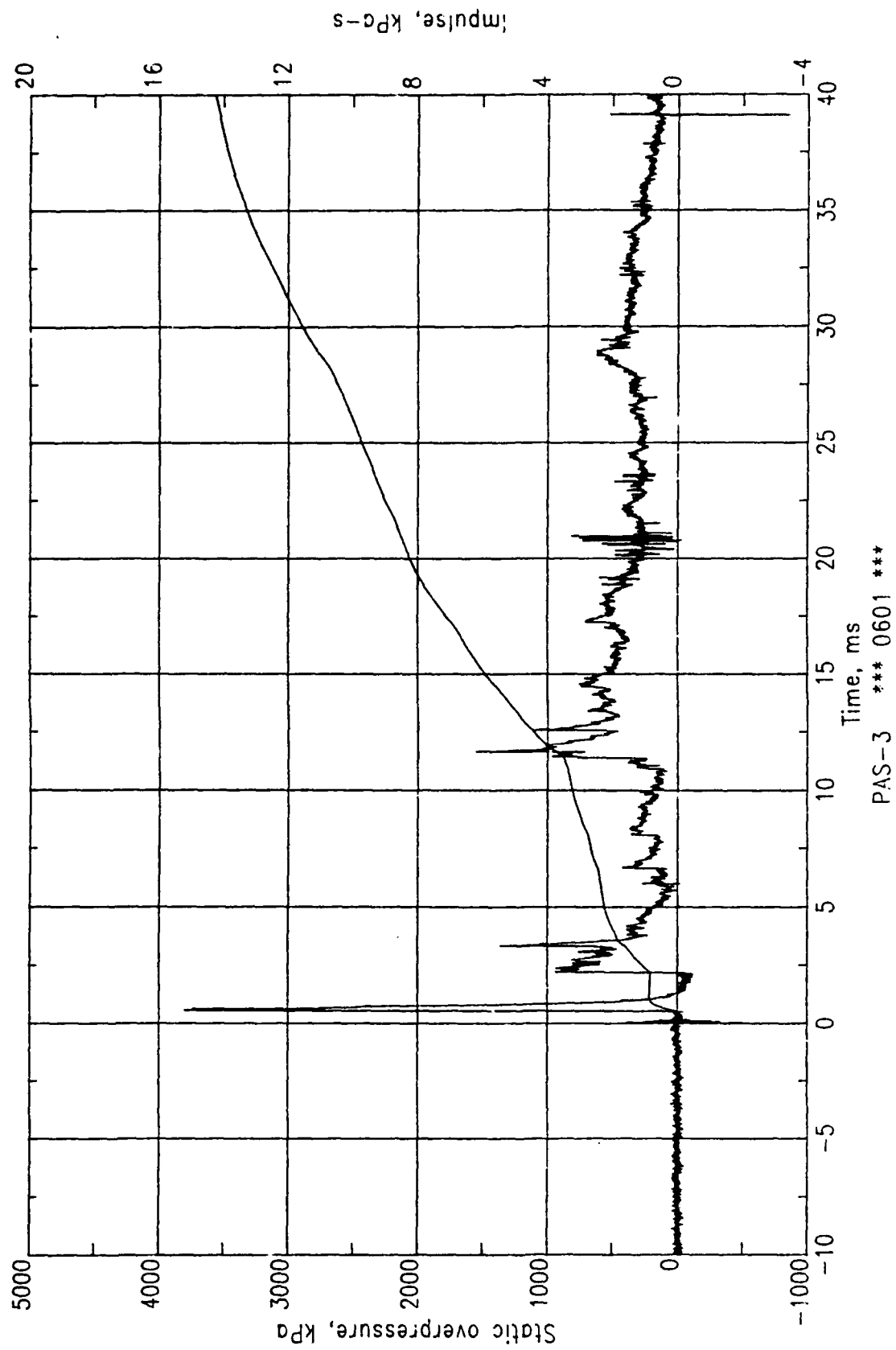




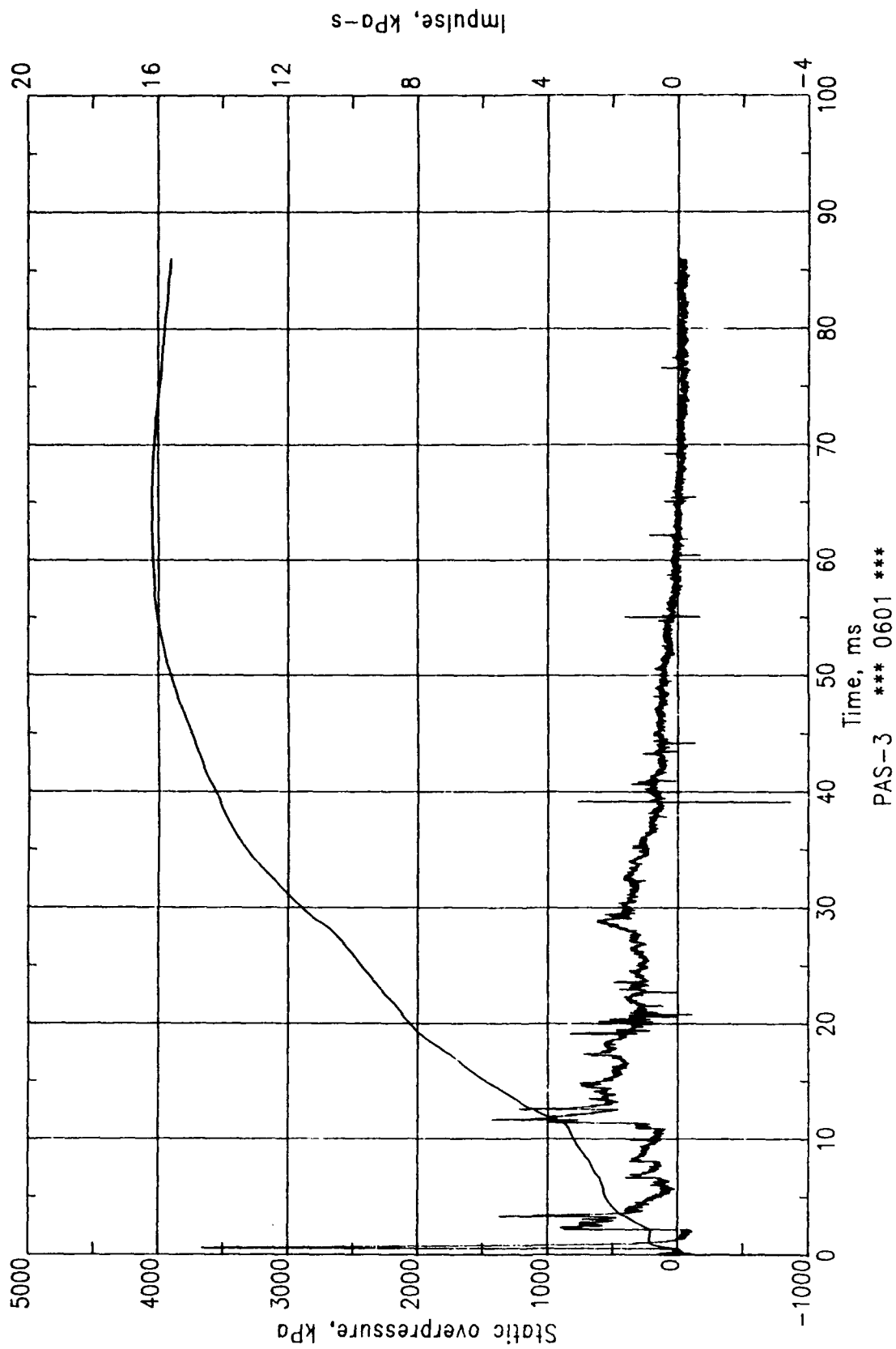


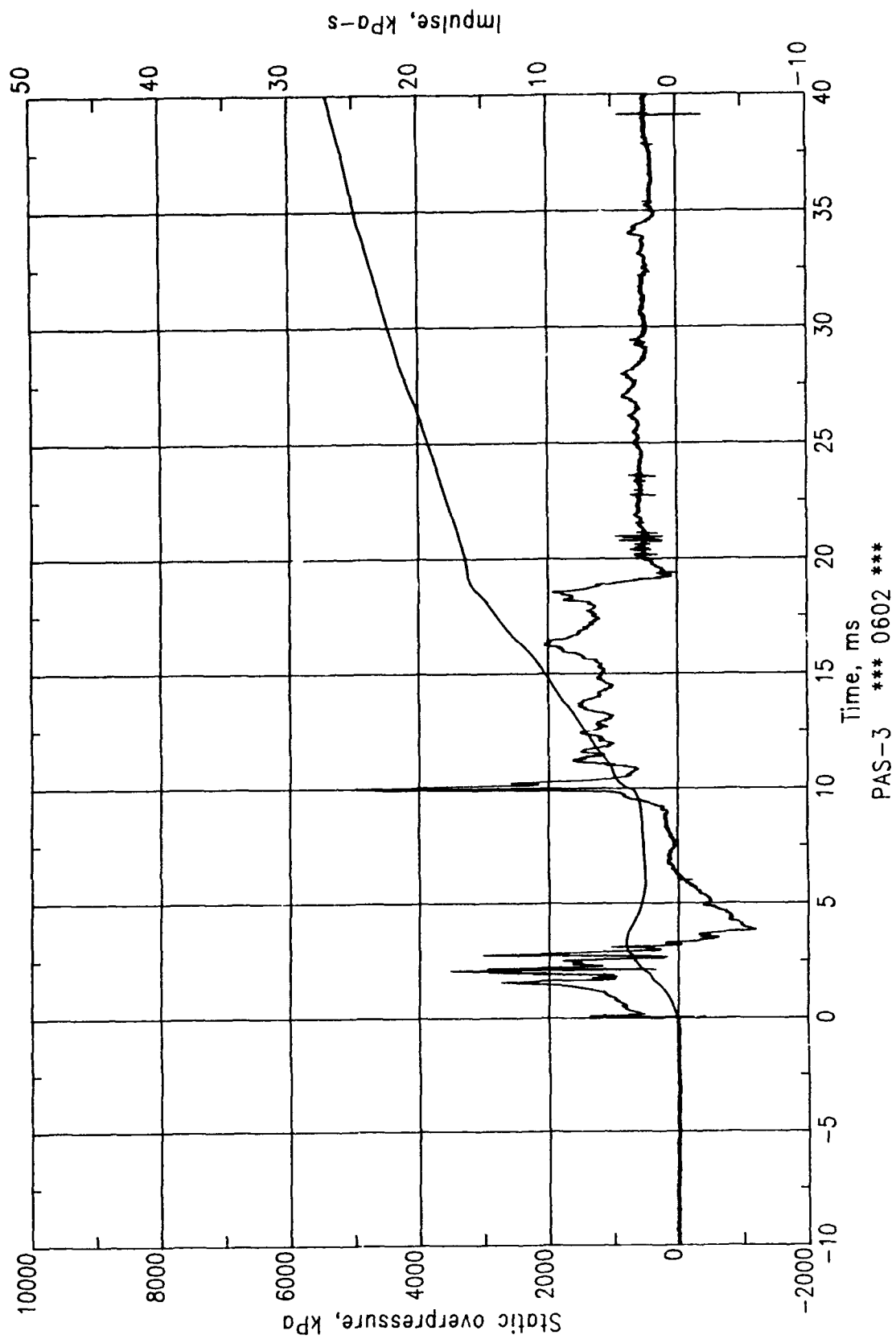


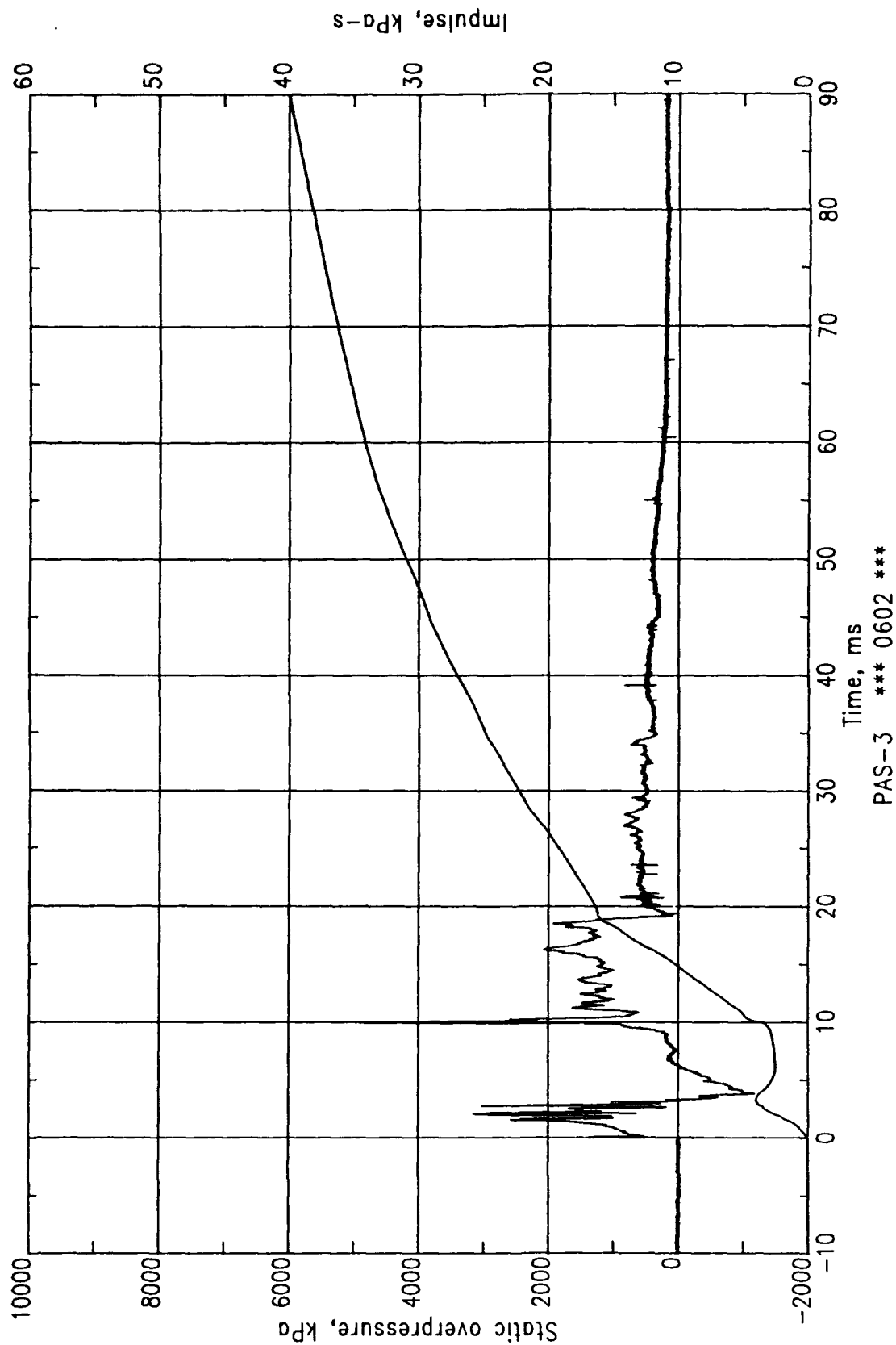


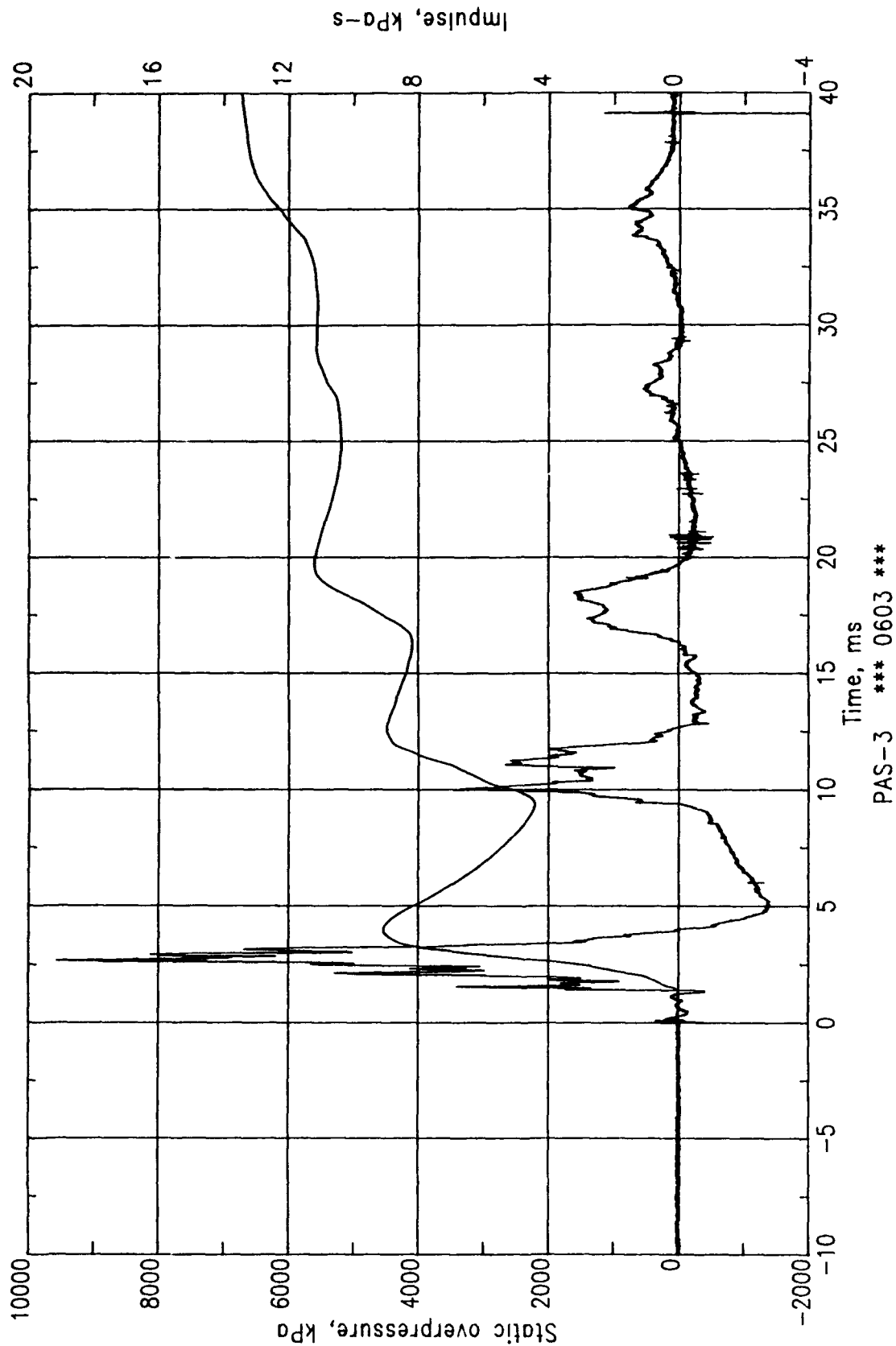


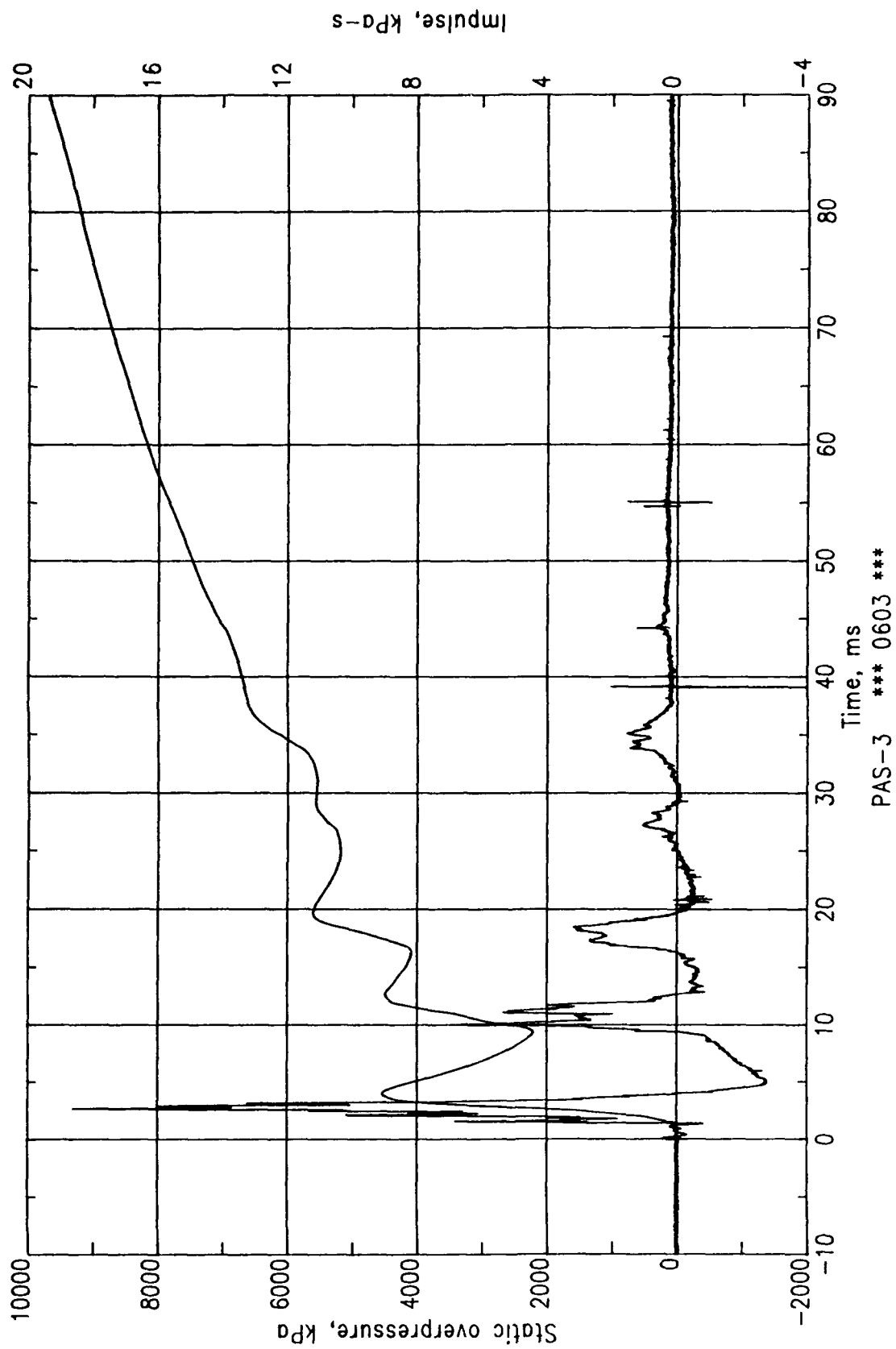
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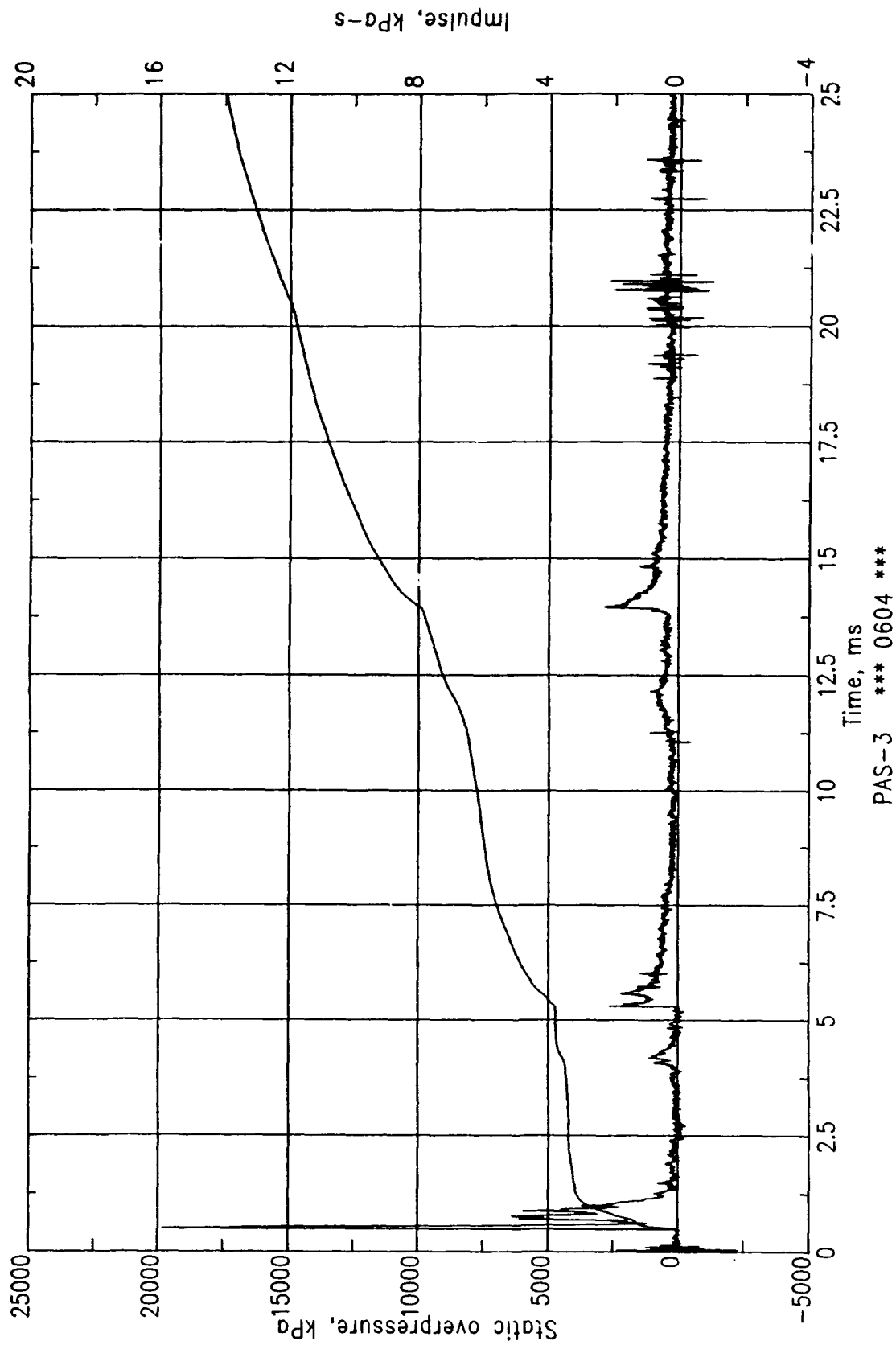


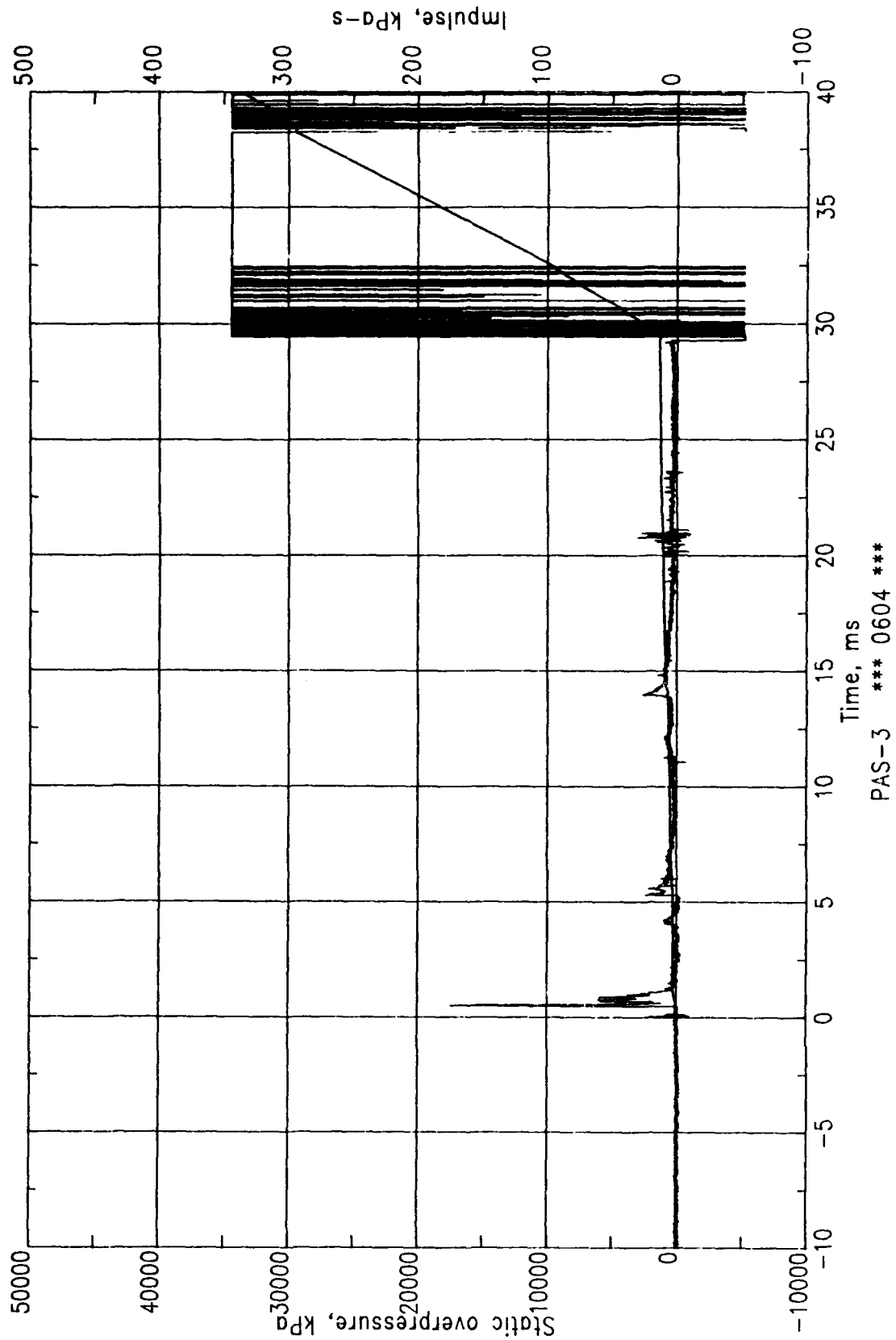


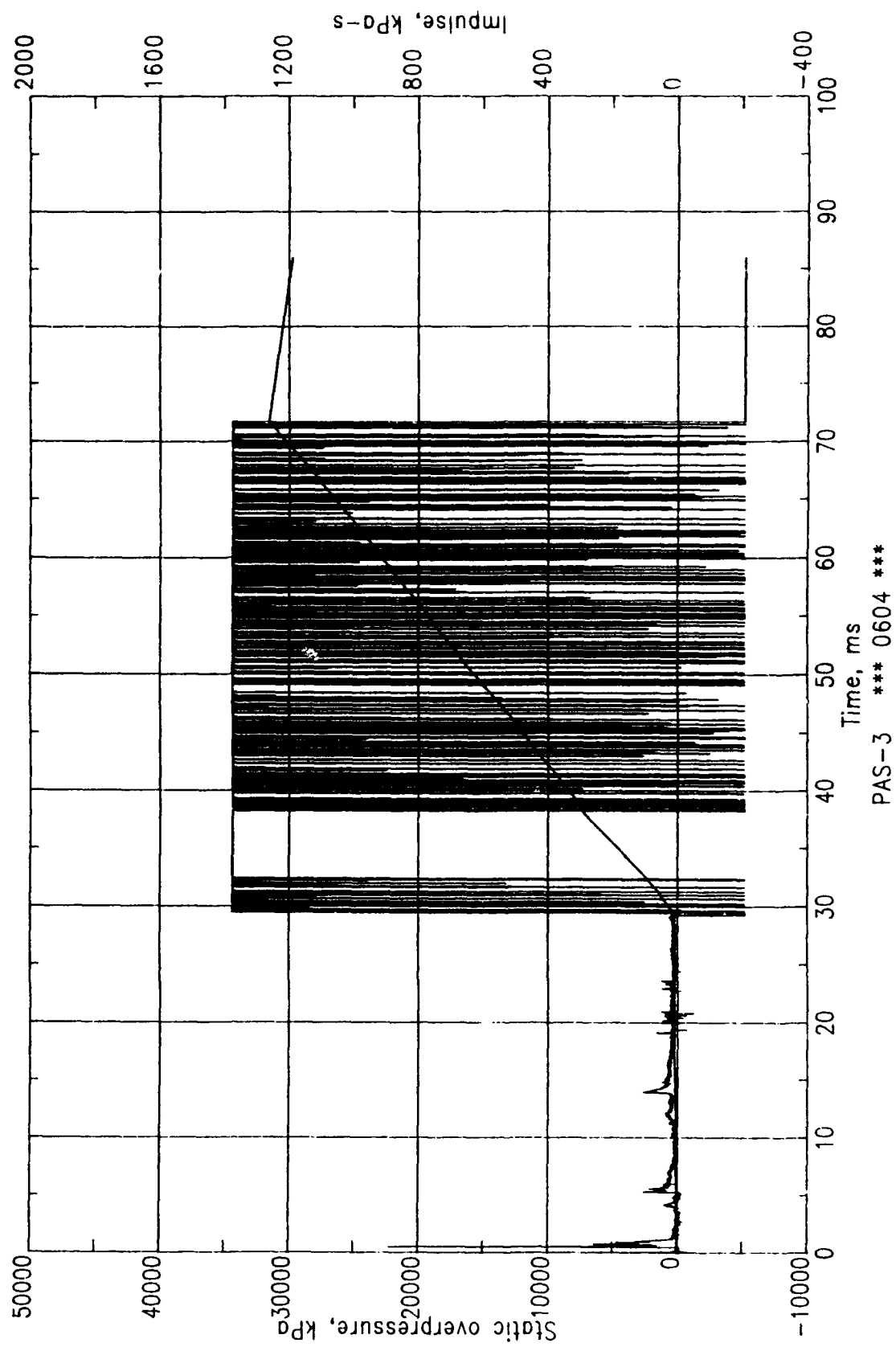


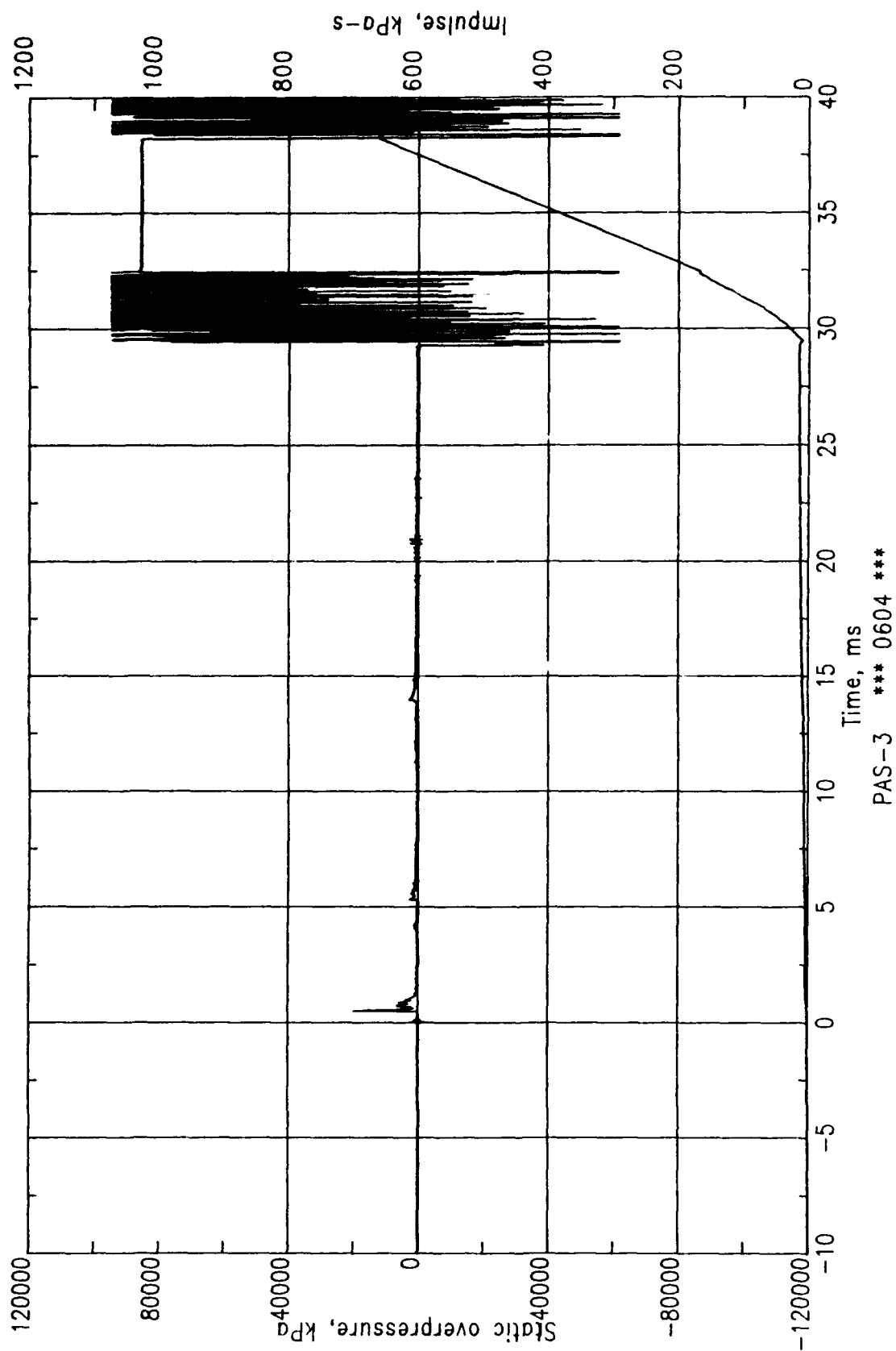


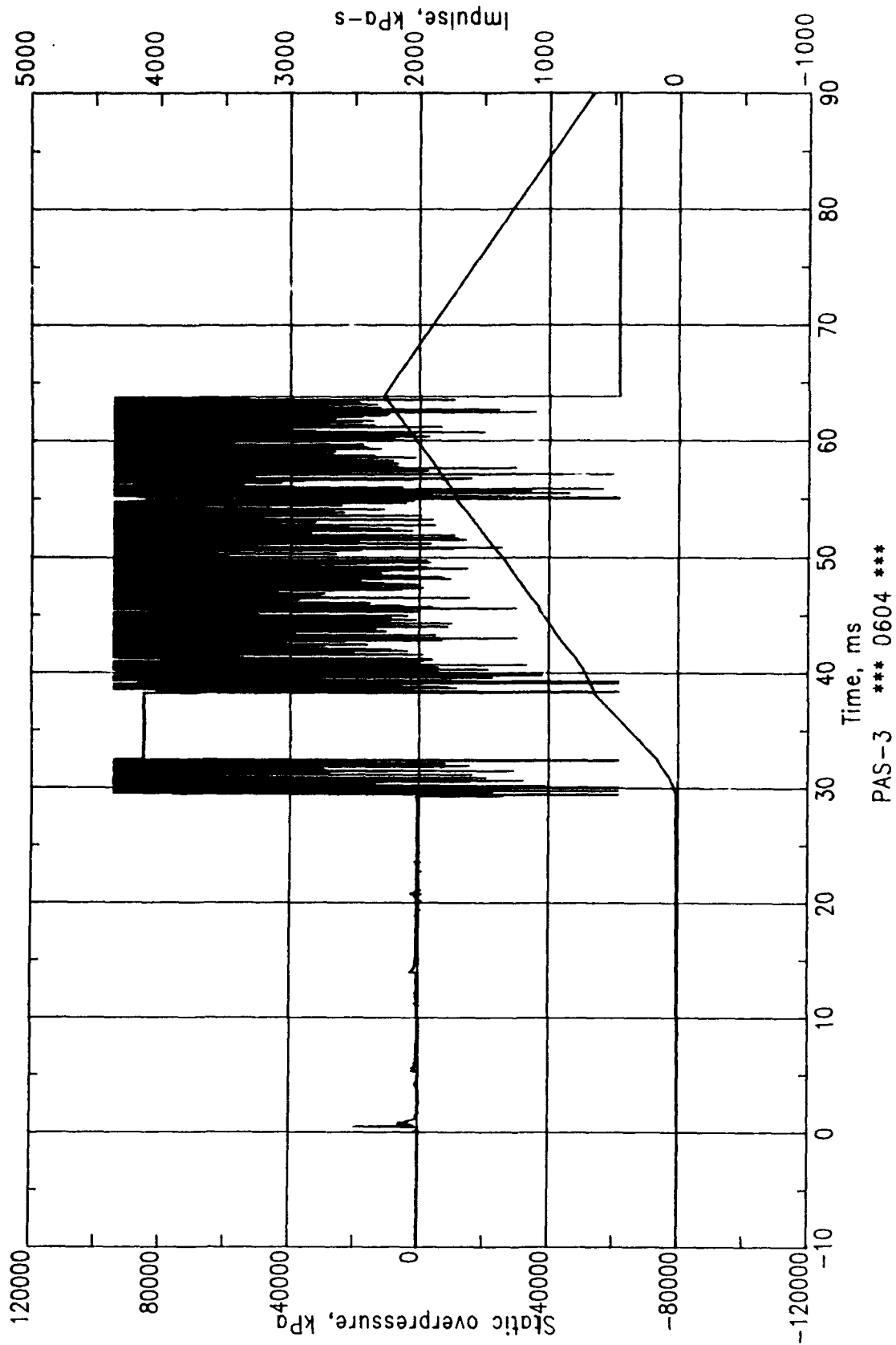


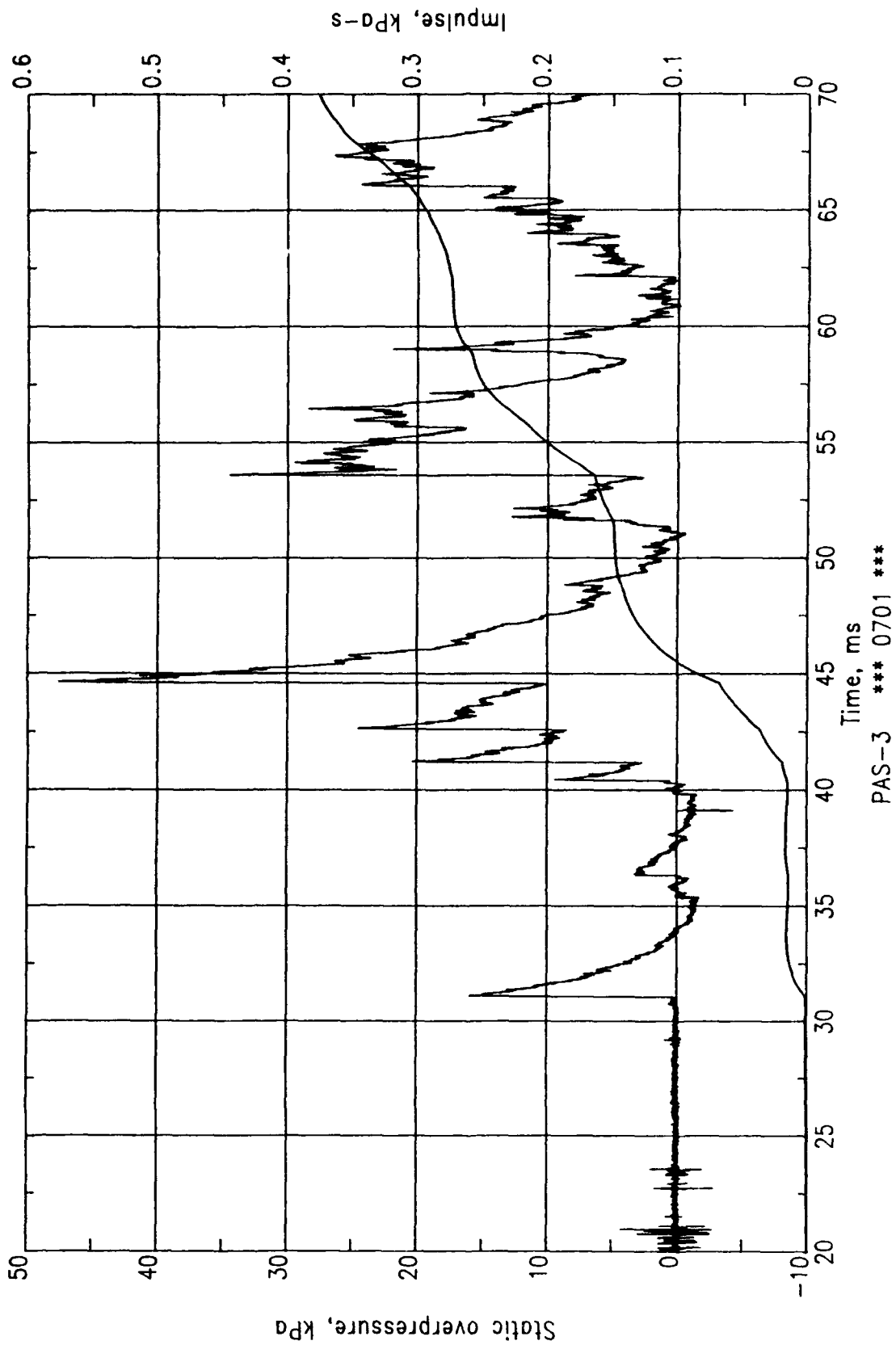


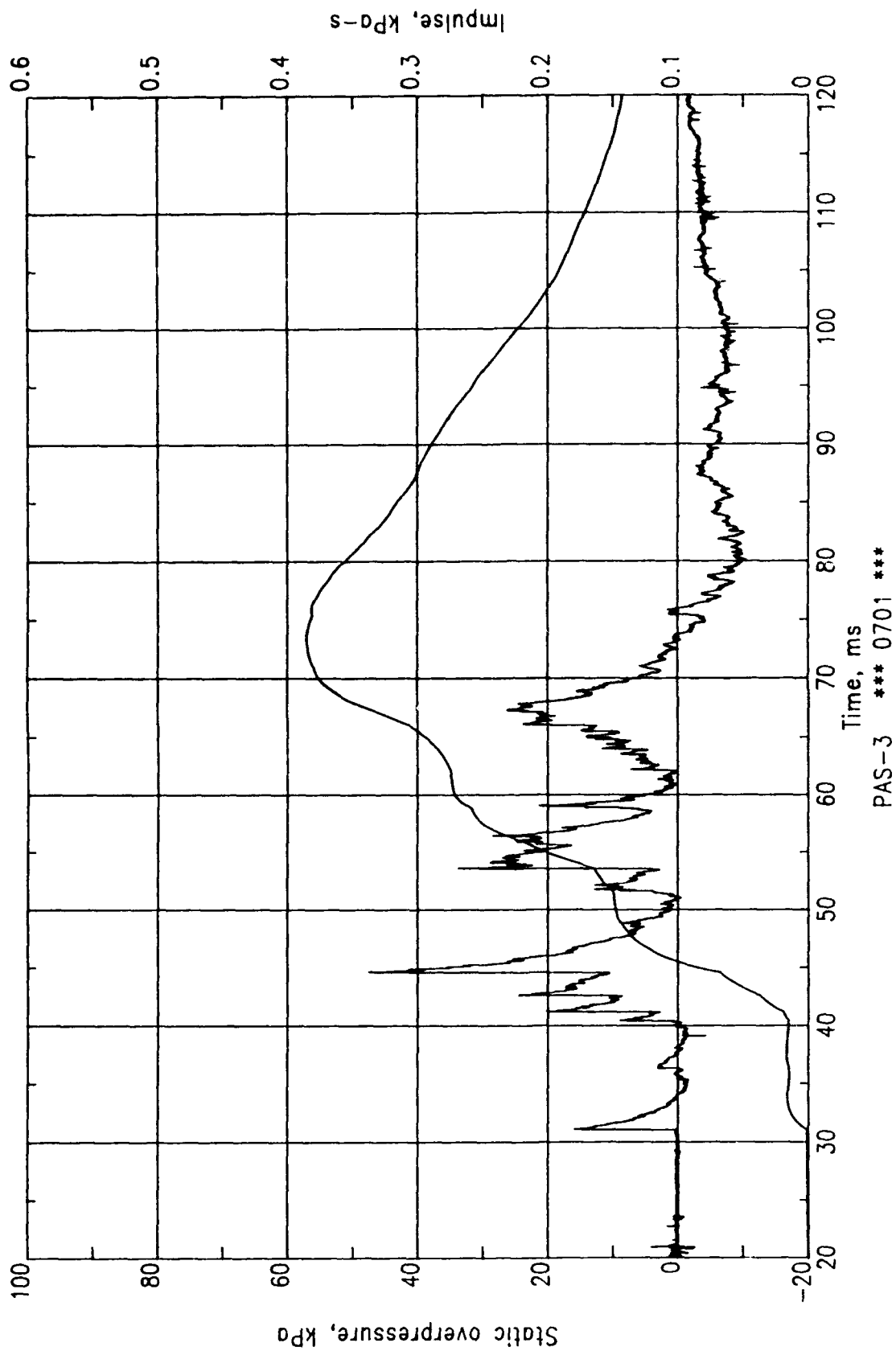


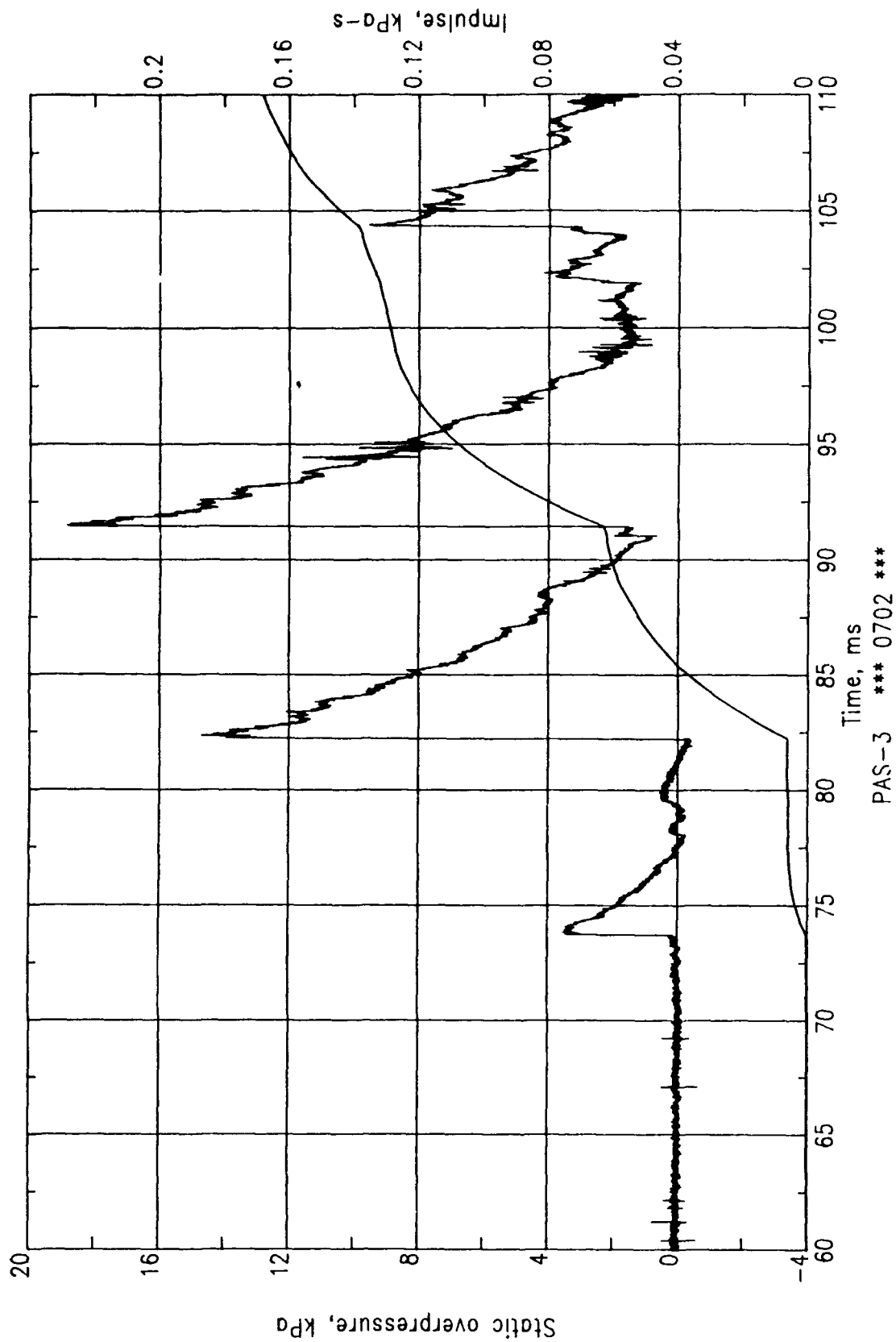


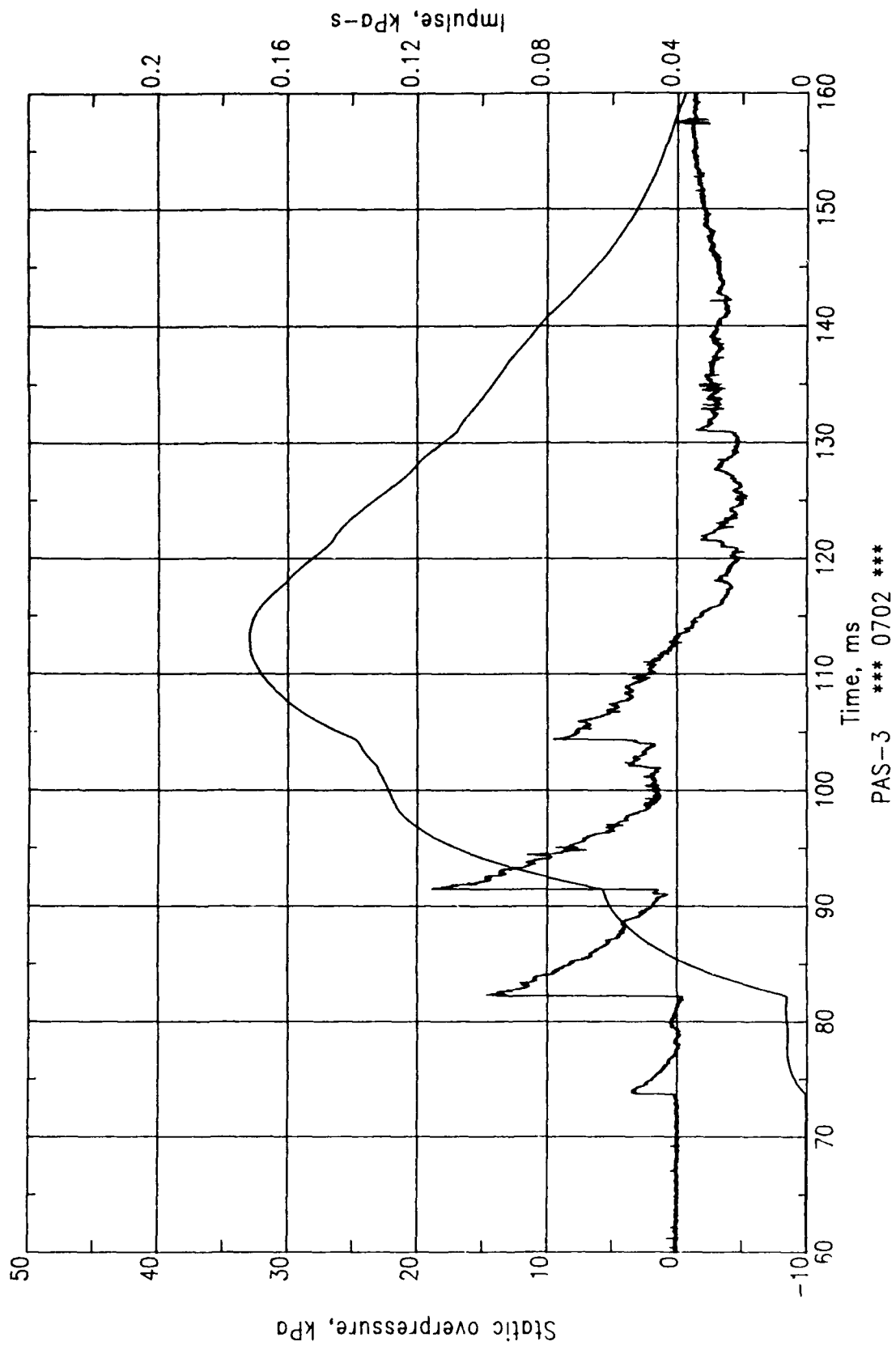




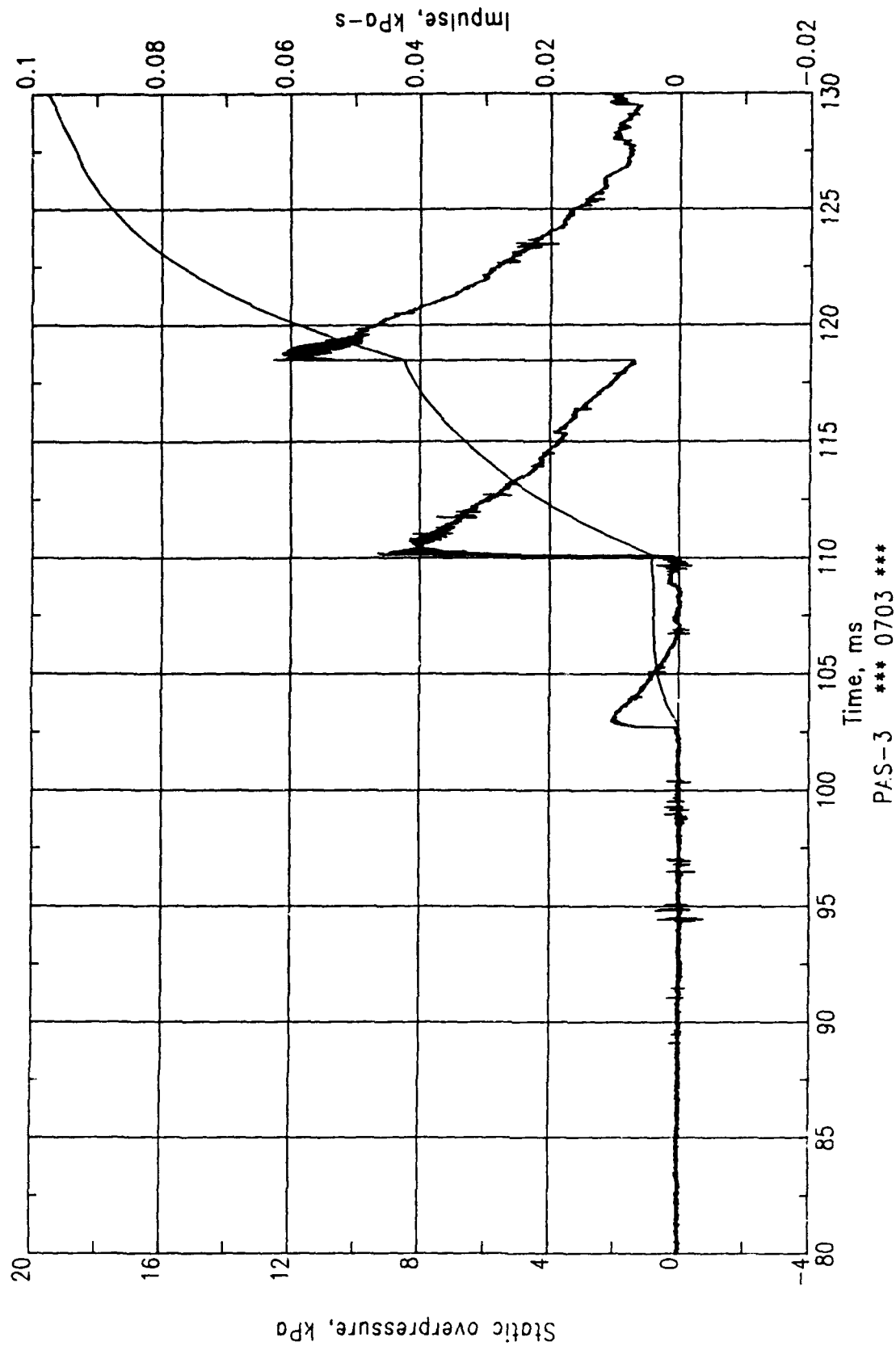


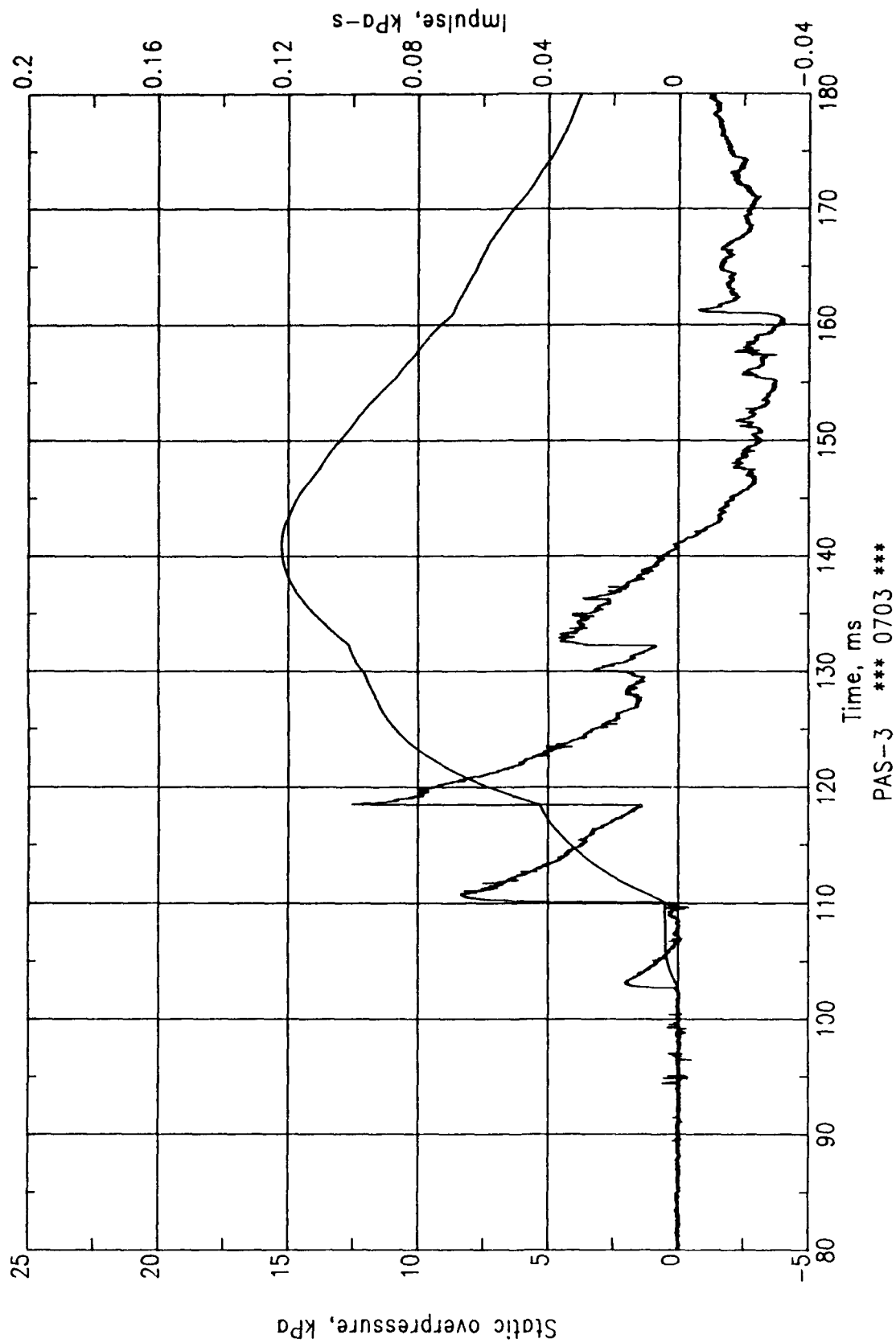




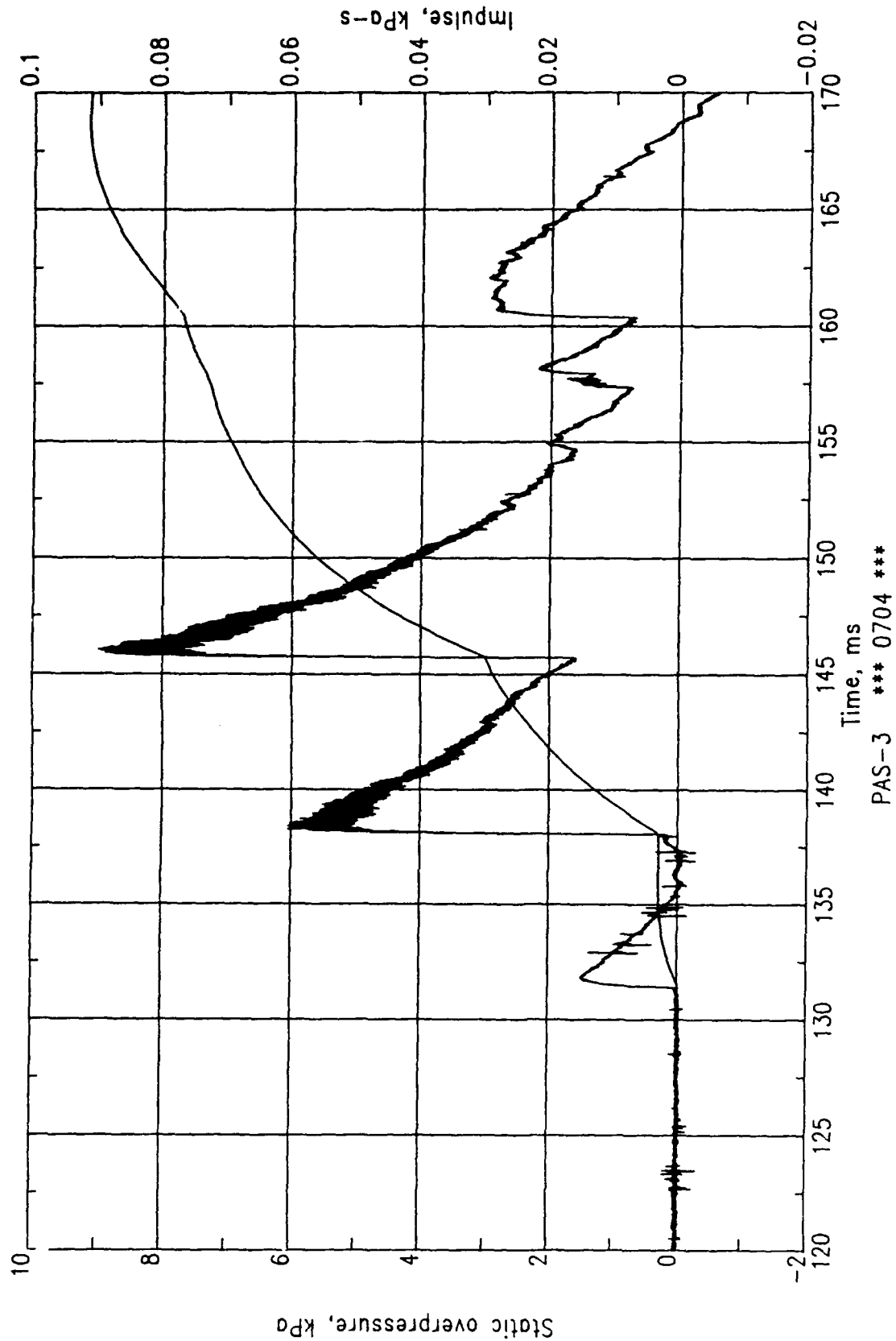


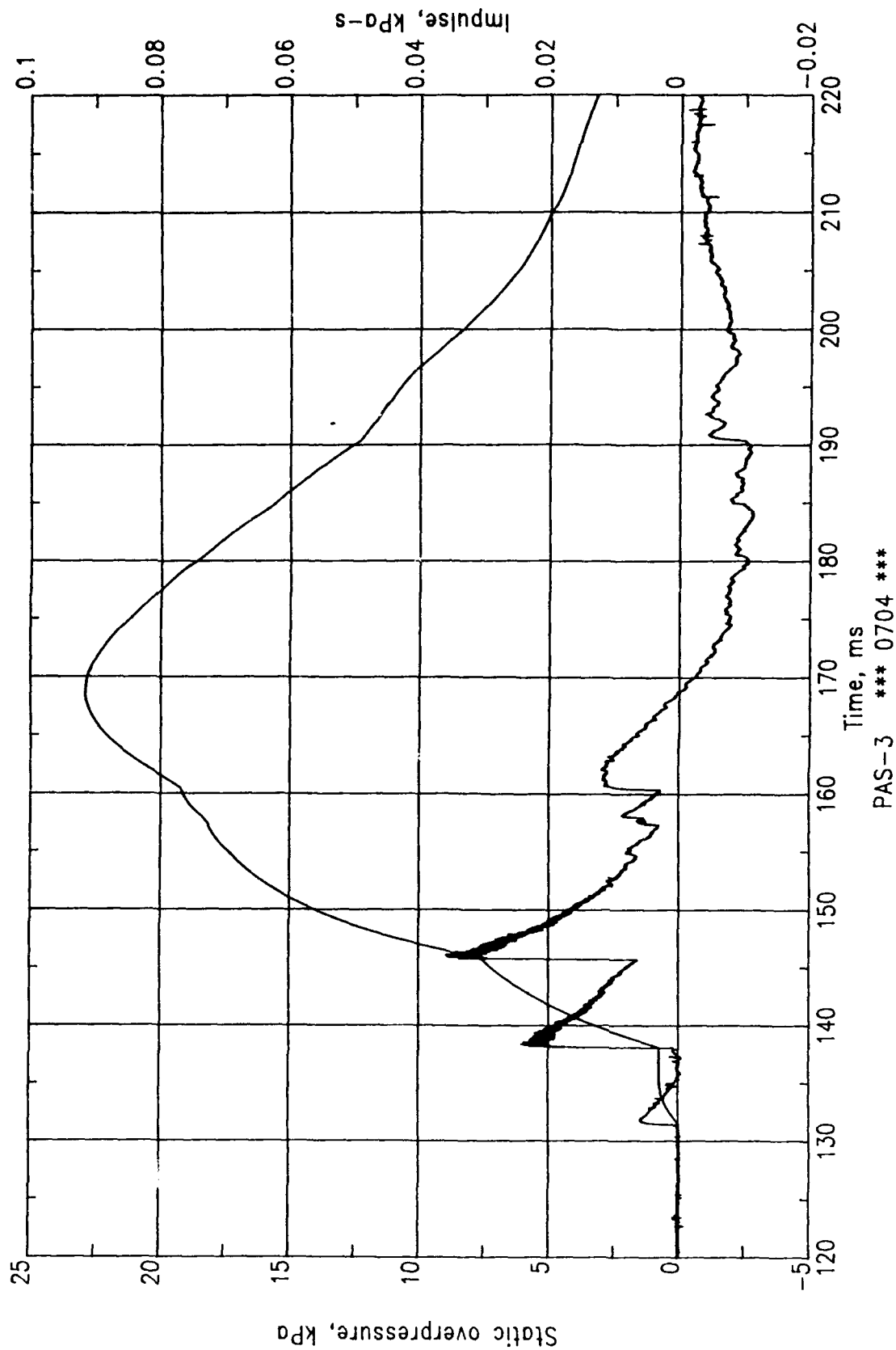
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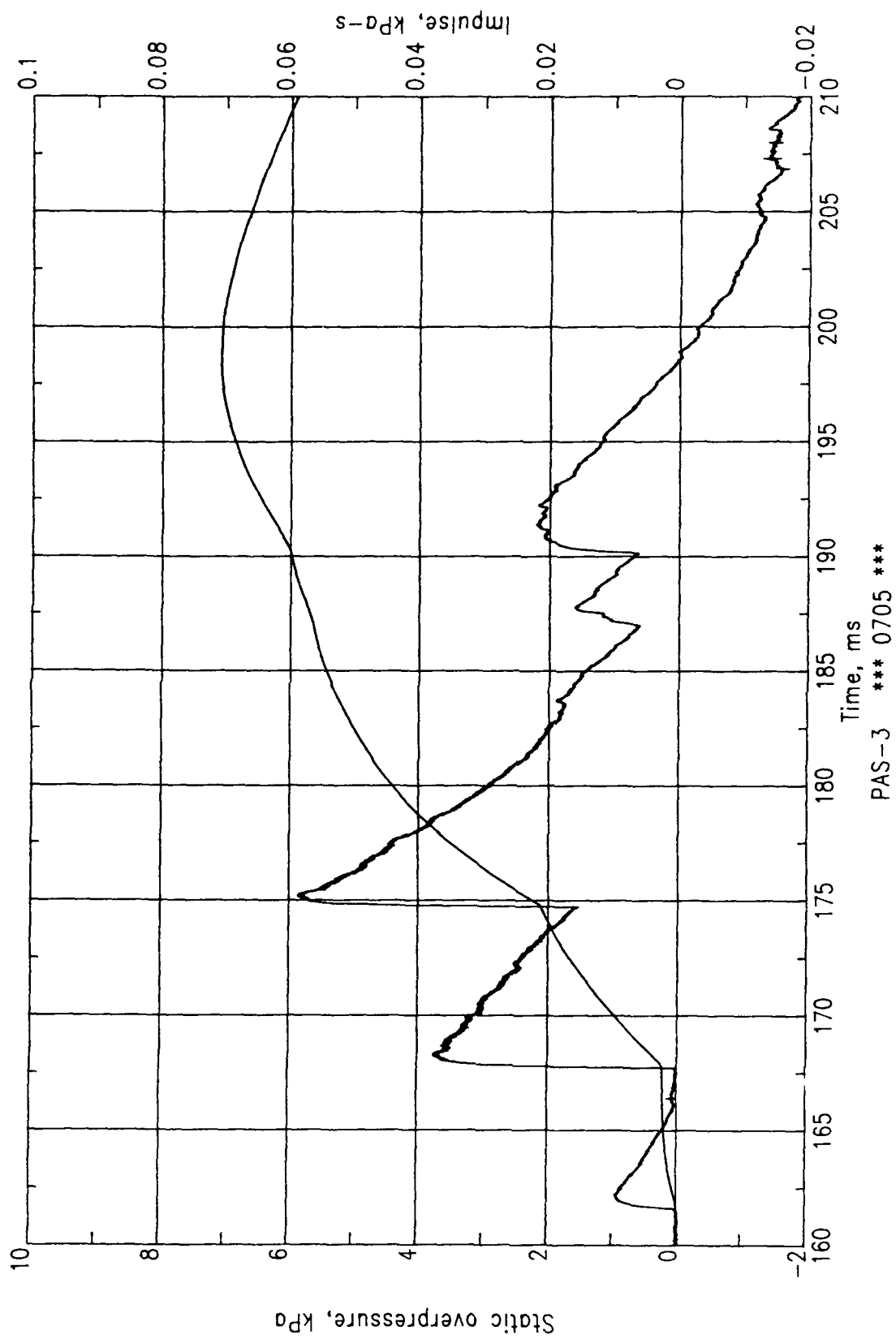


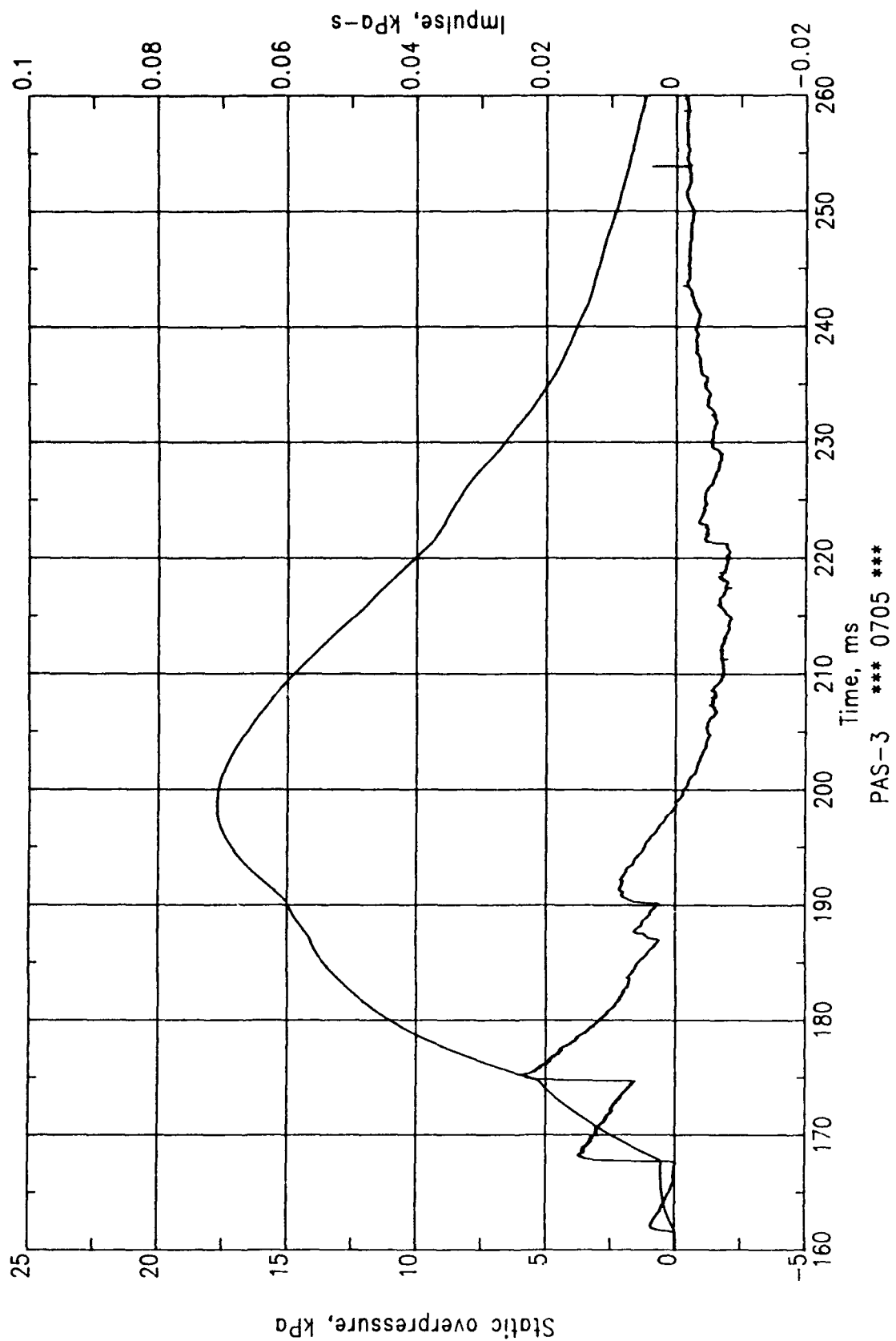


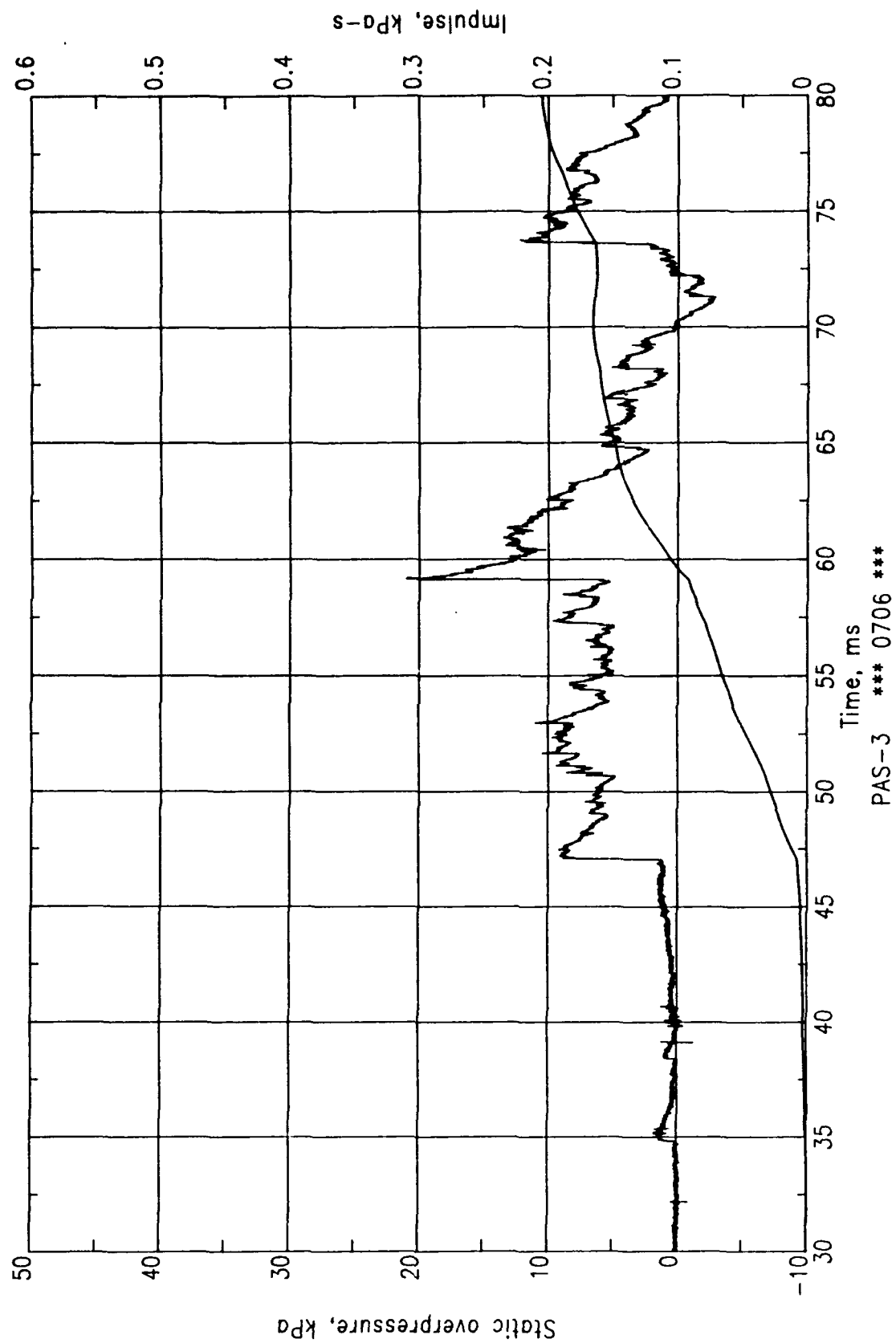
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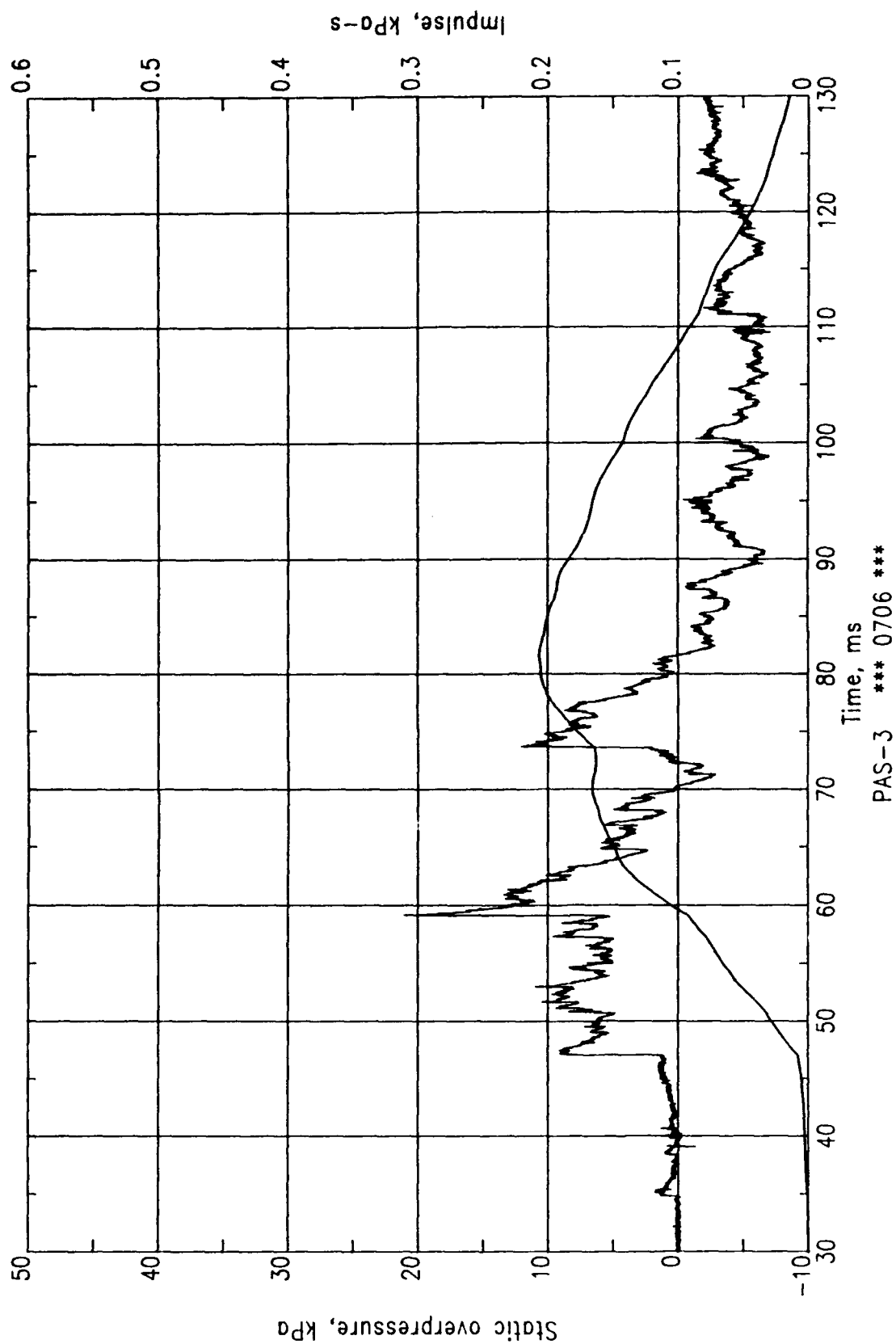


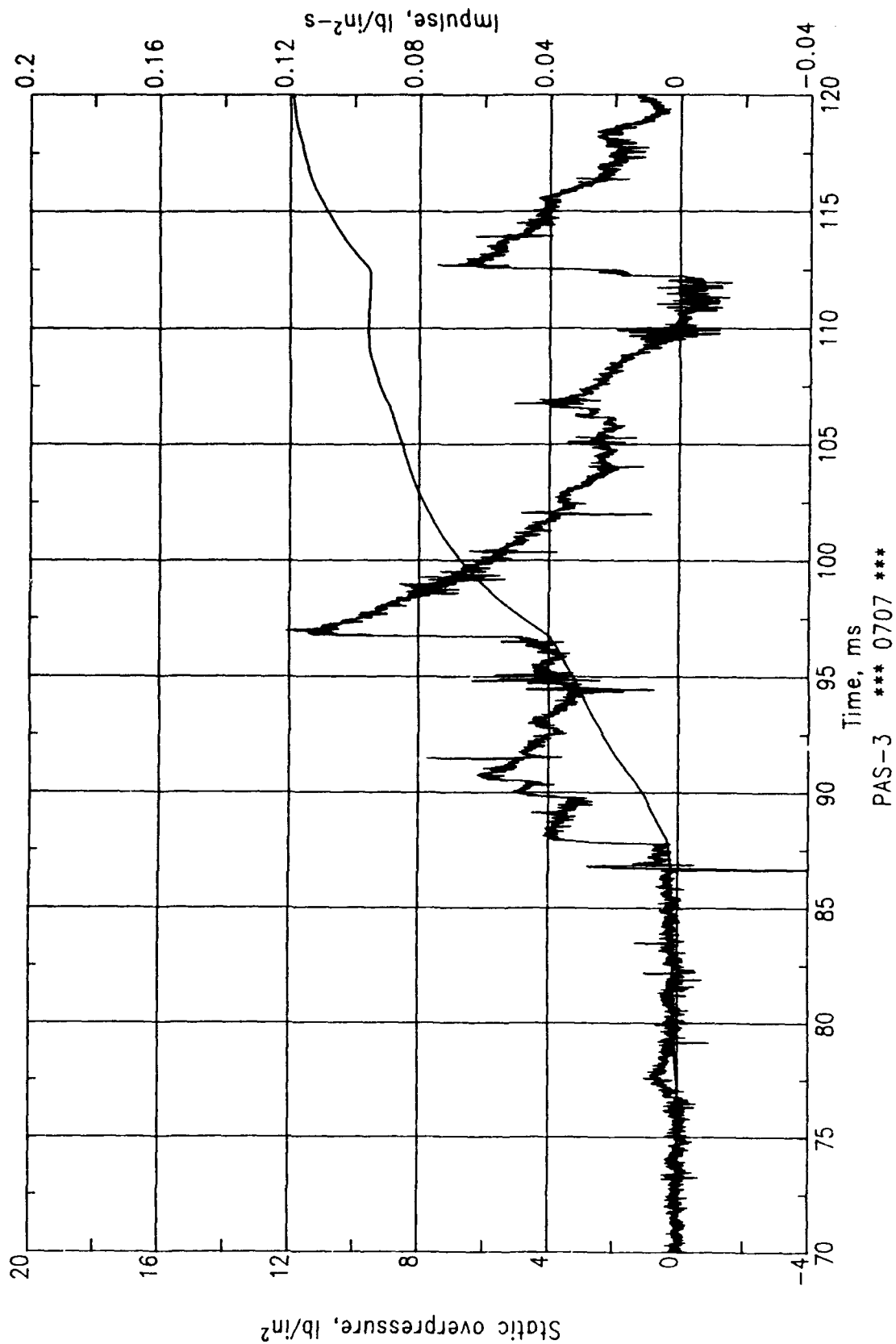




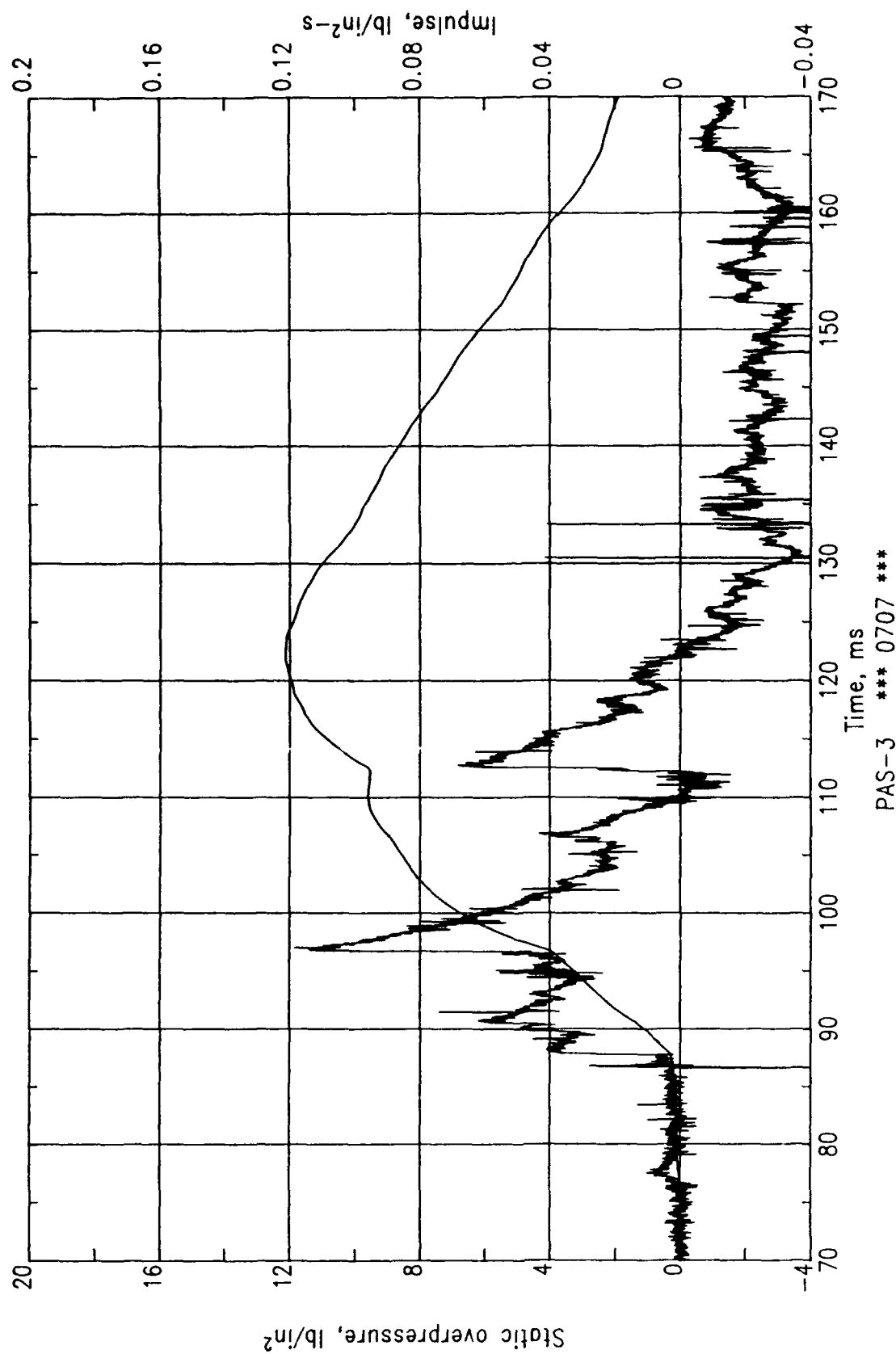


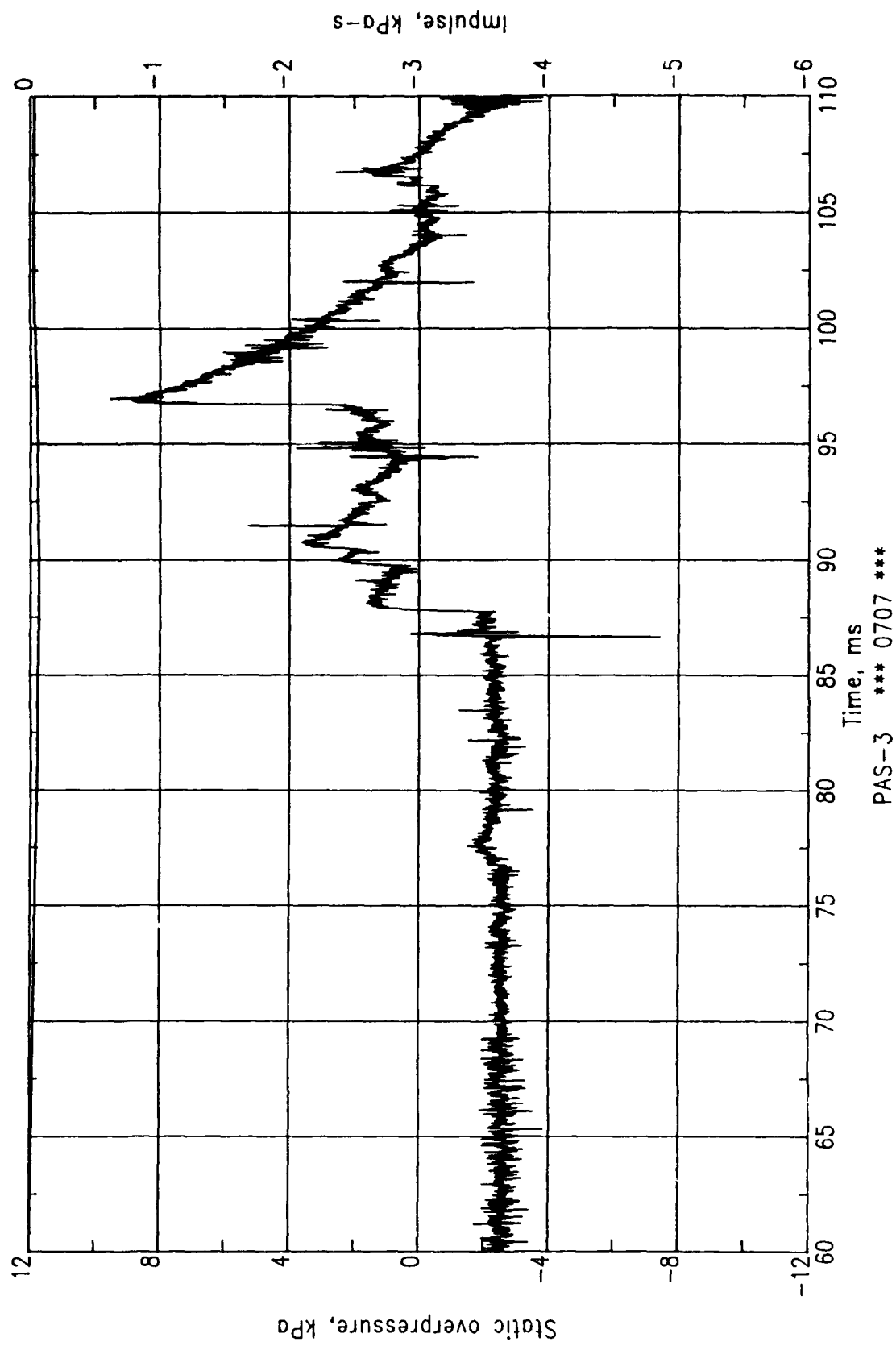


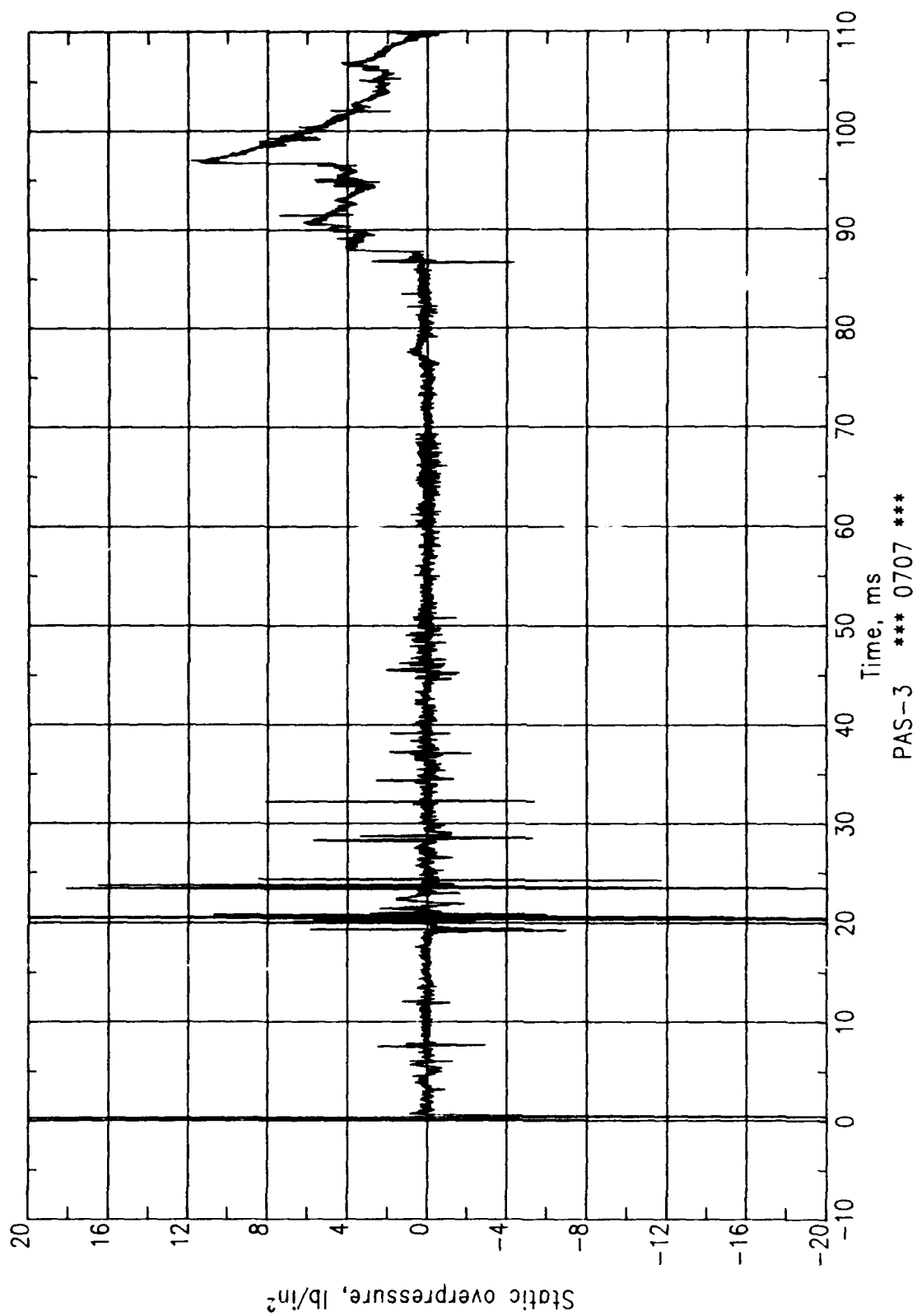


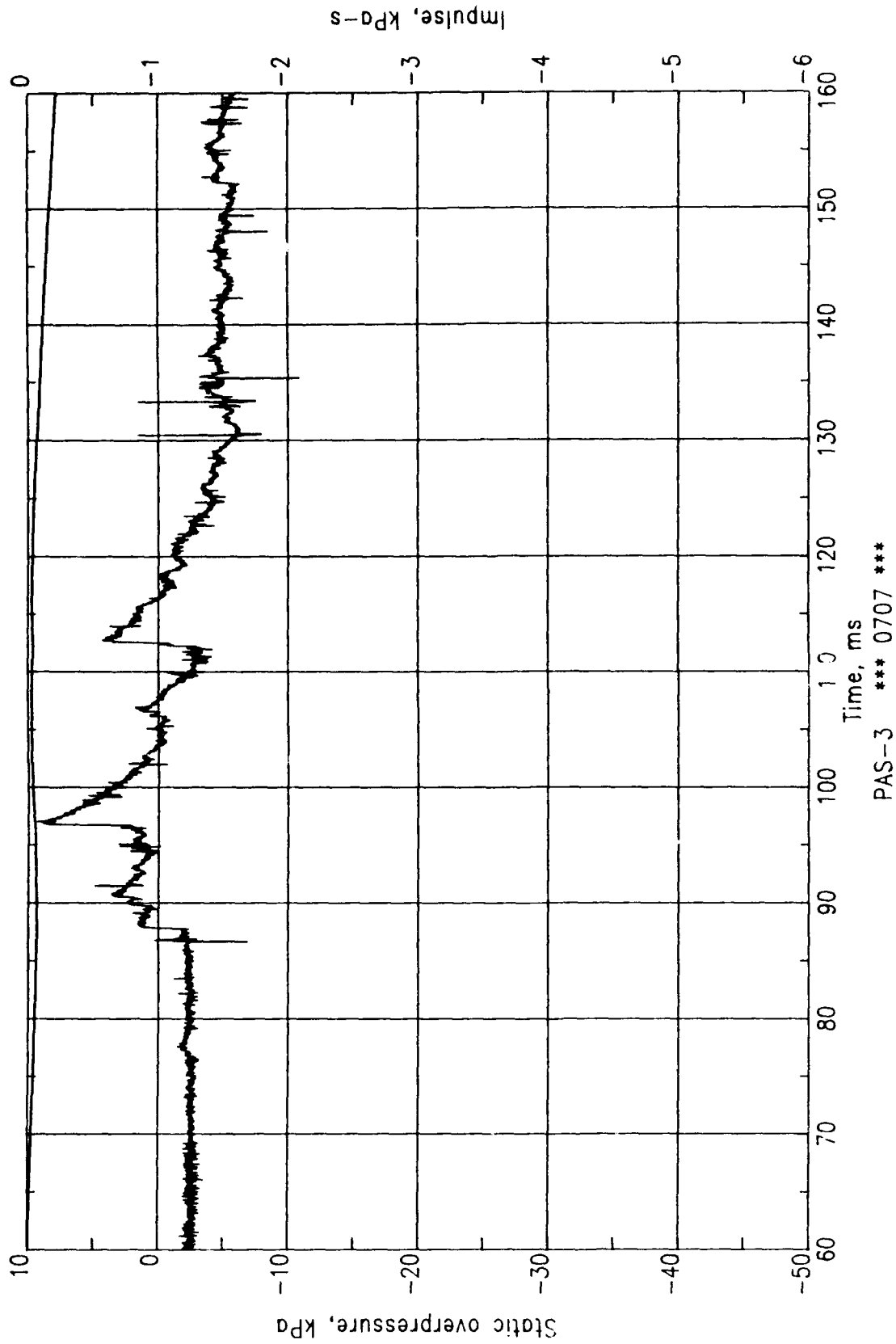


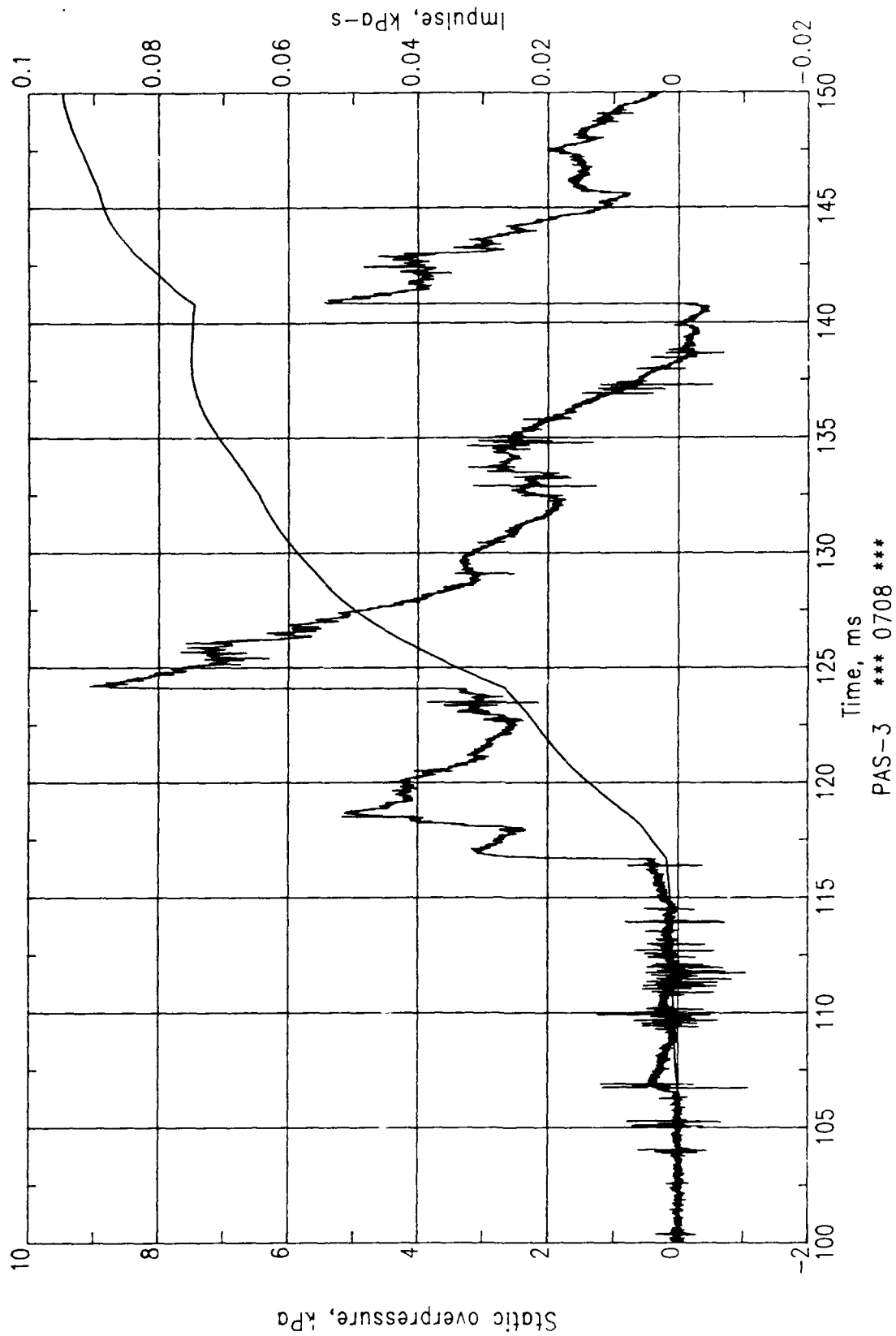
PAS-3 *** 0707 ***

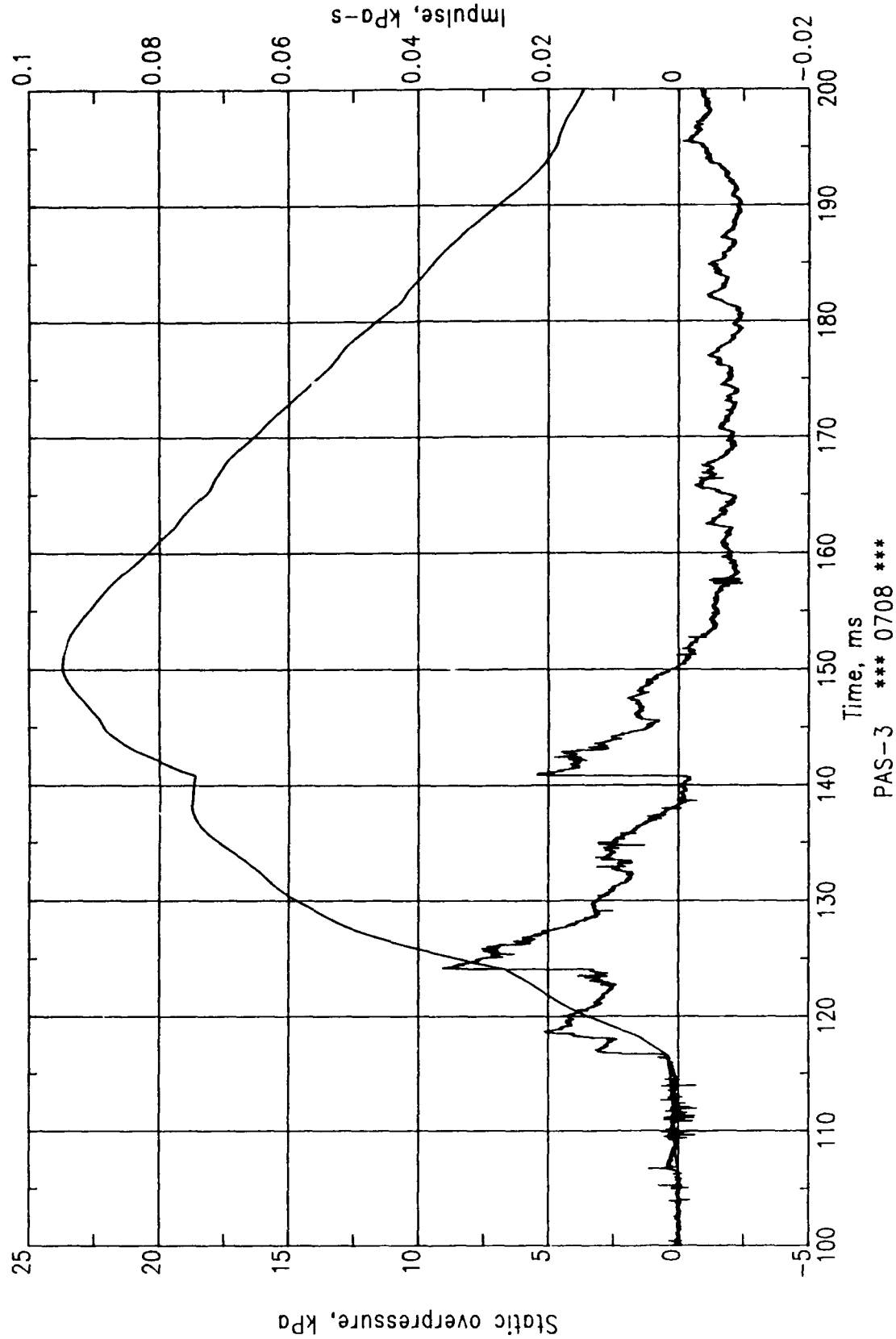


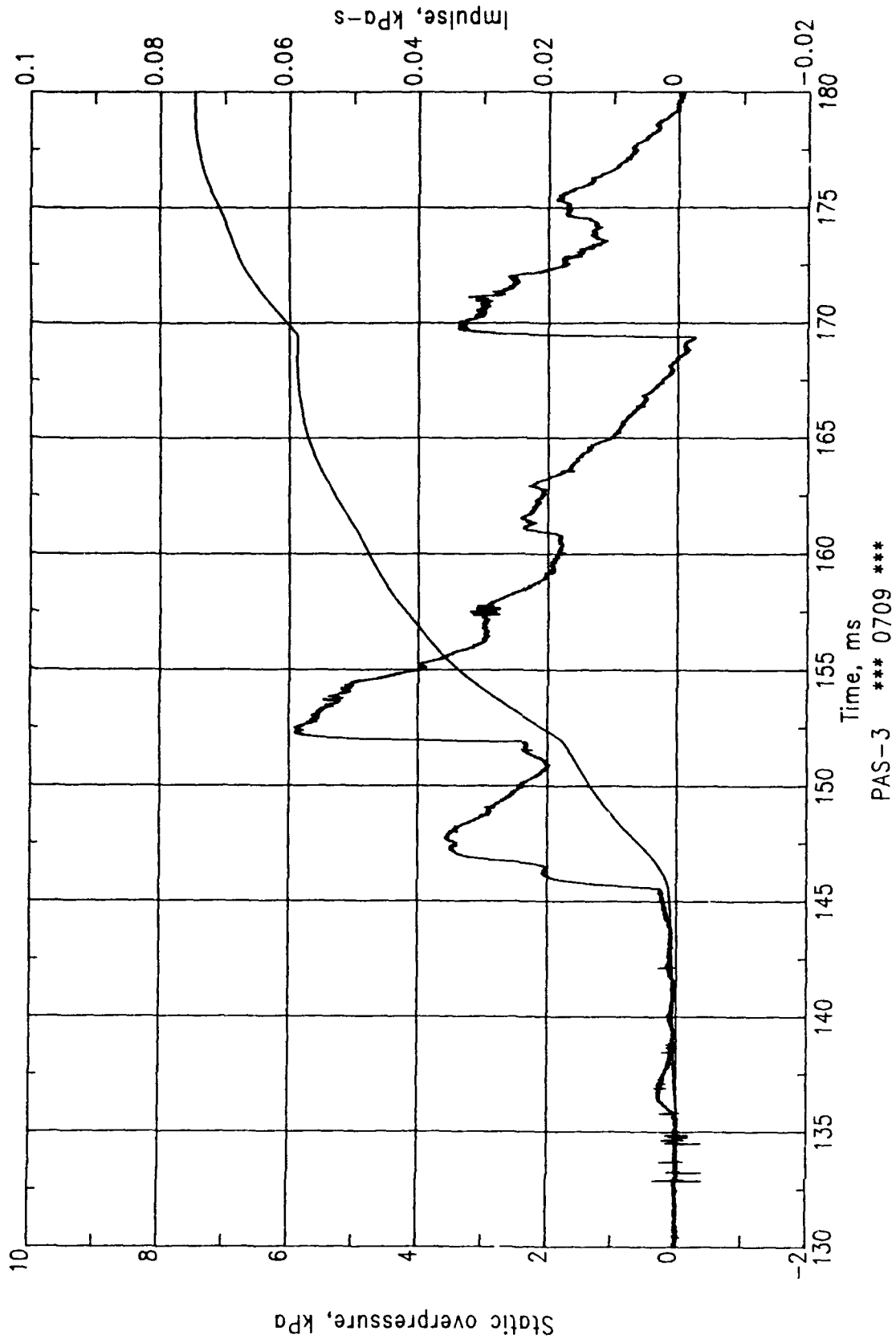


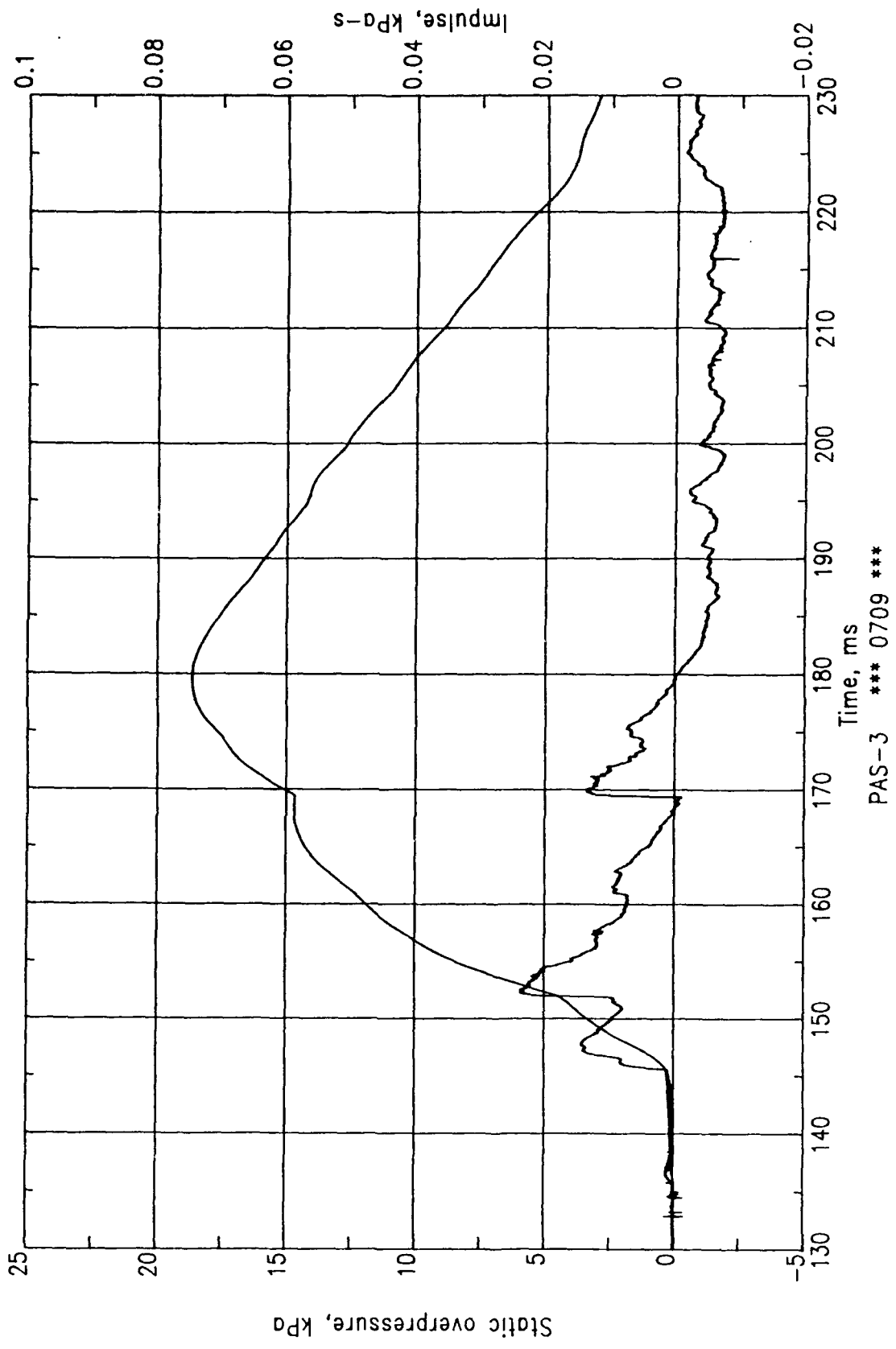




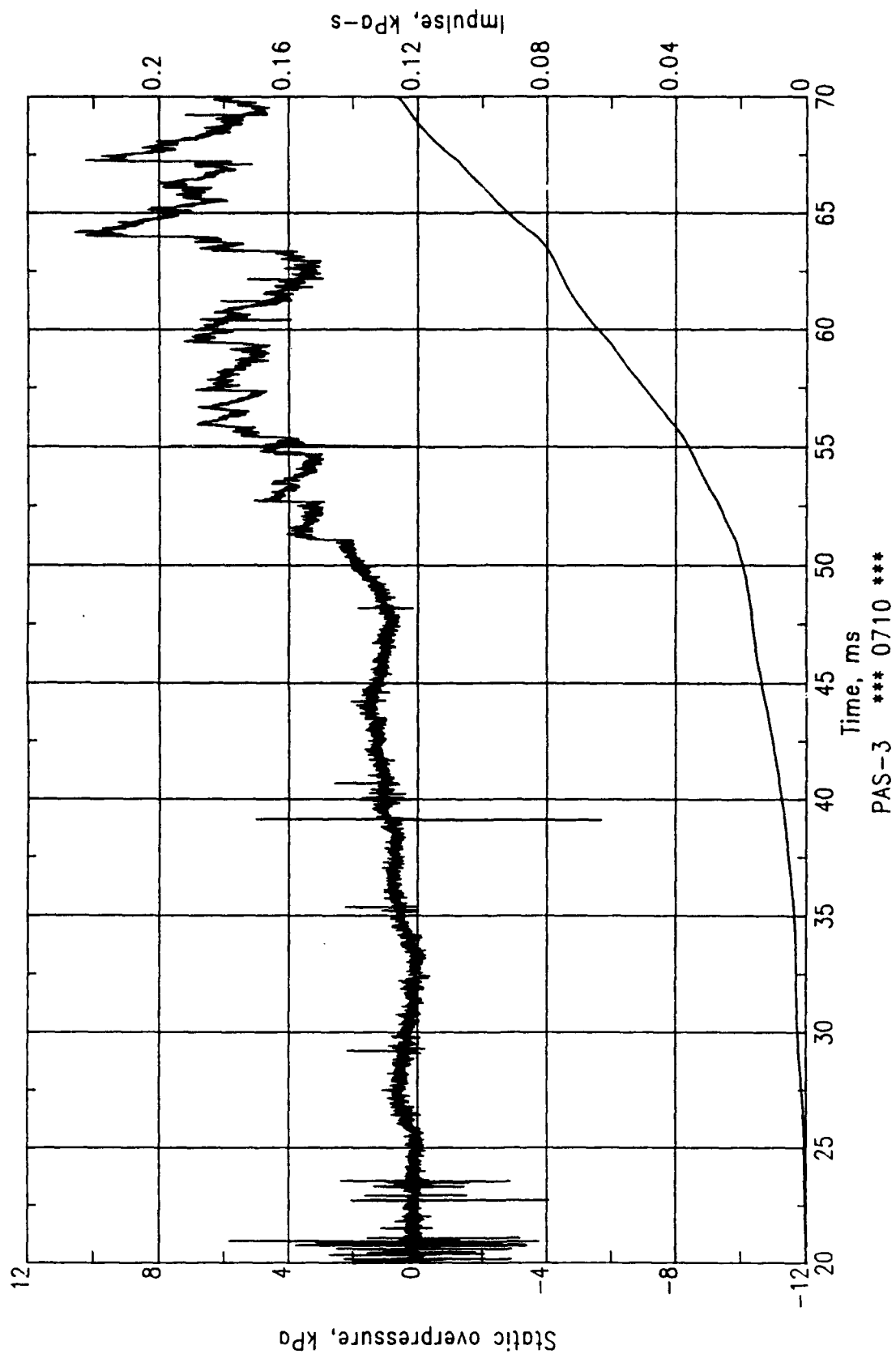


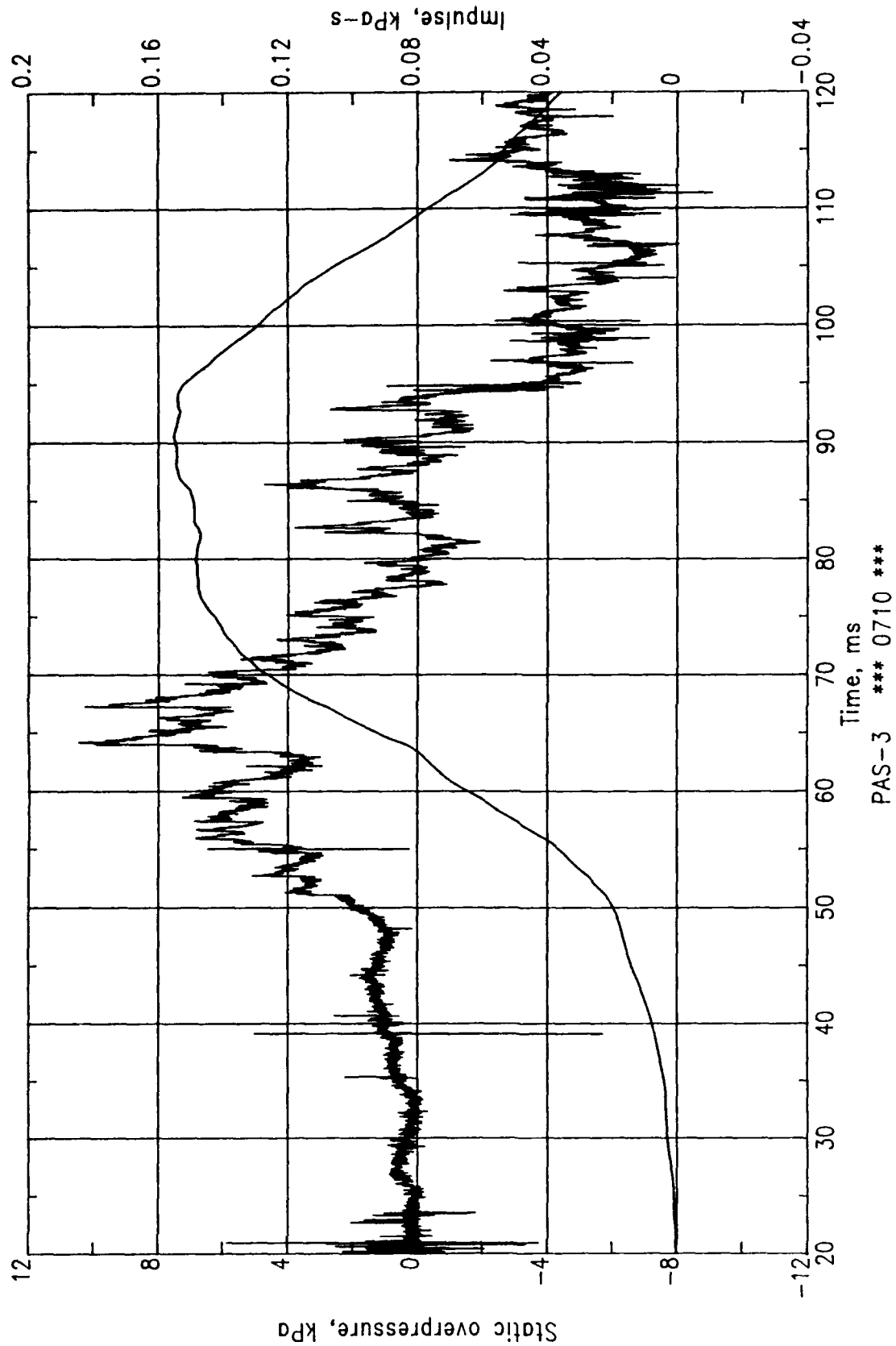


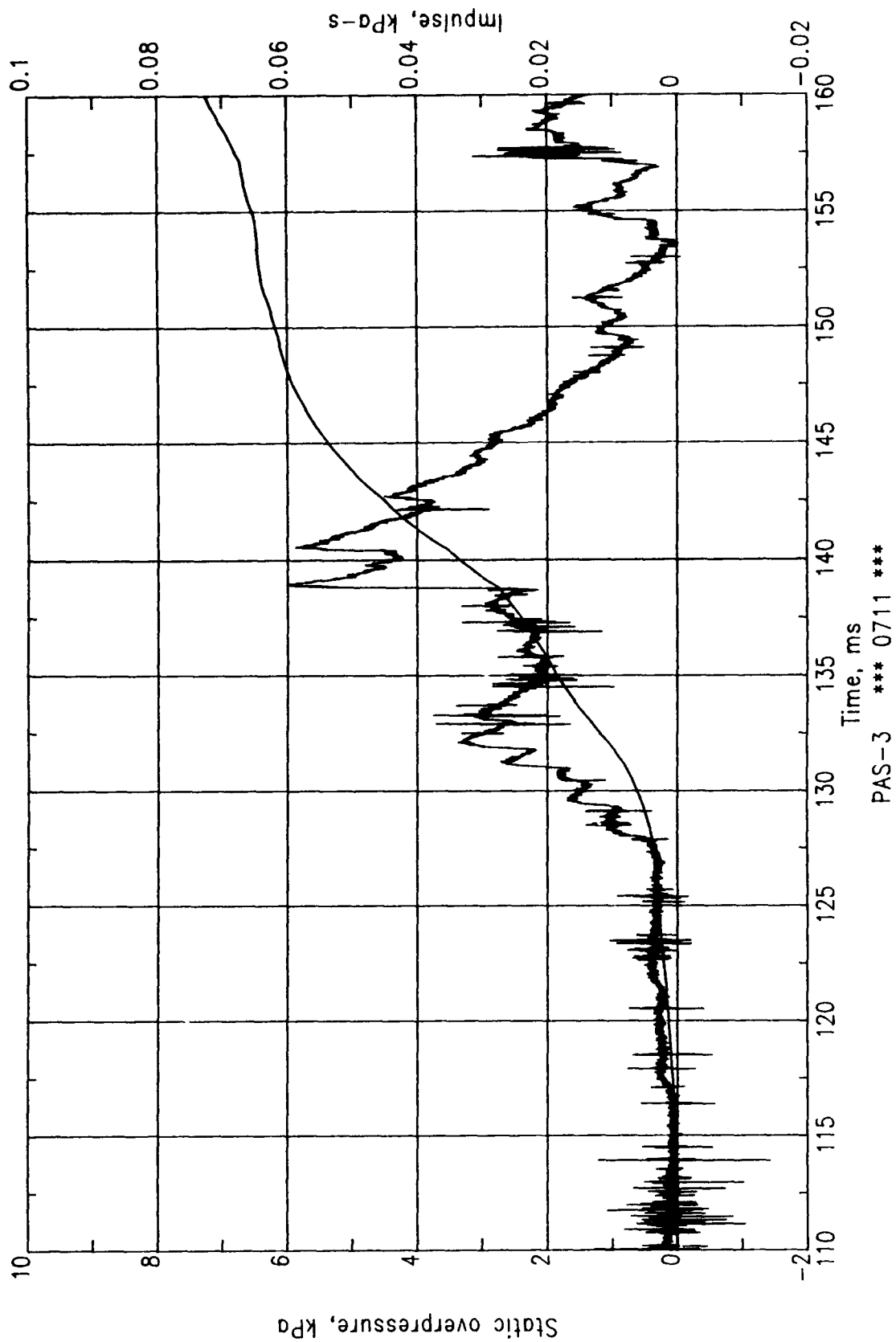


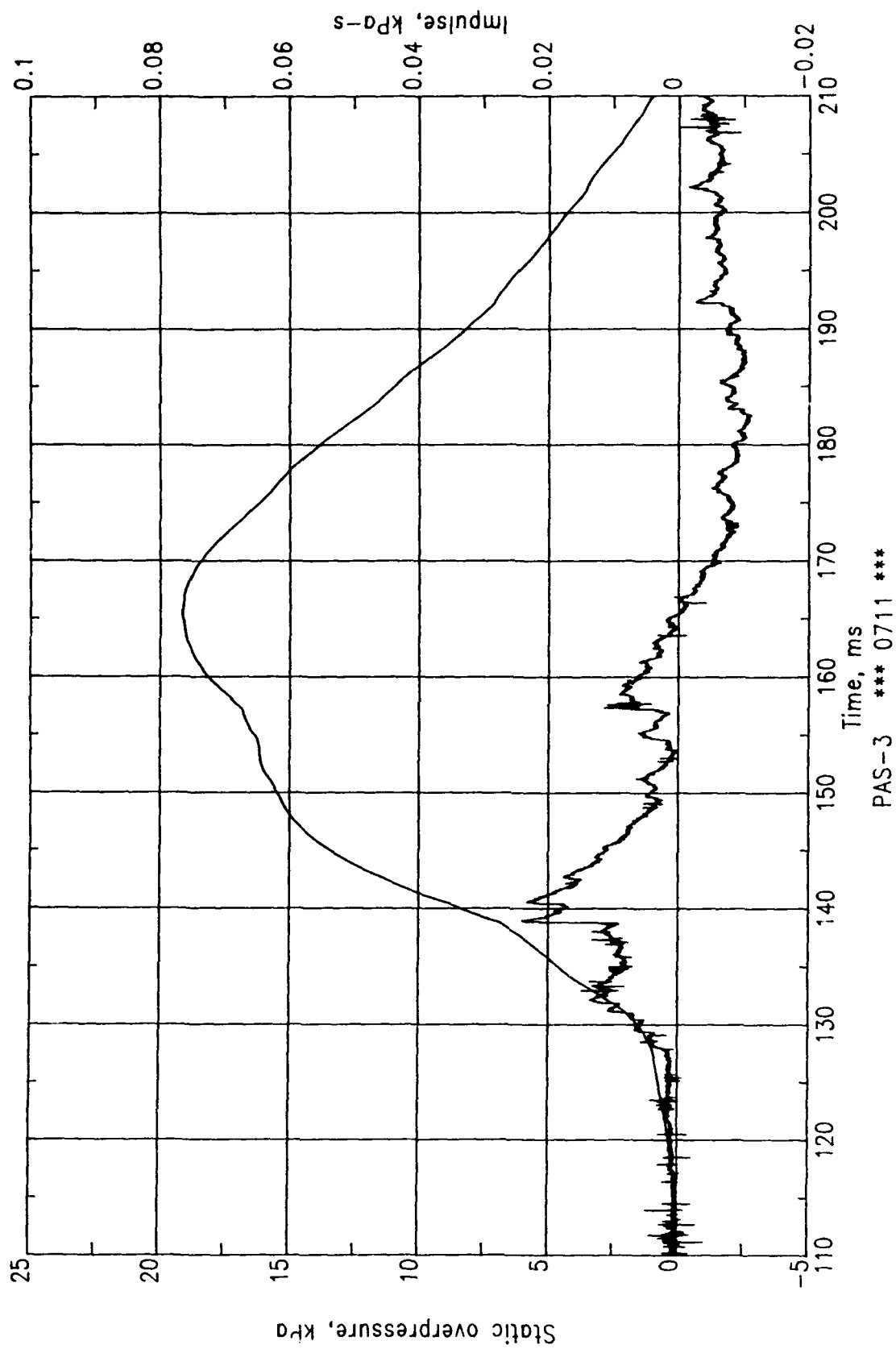


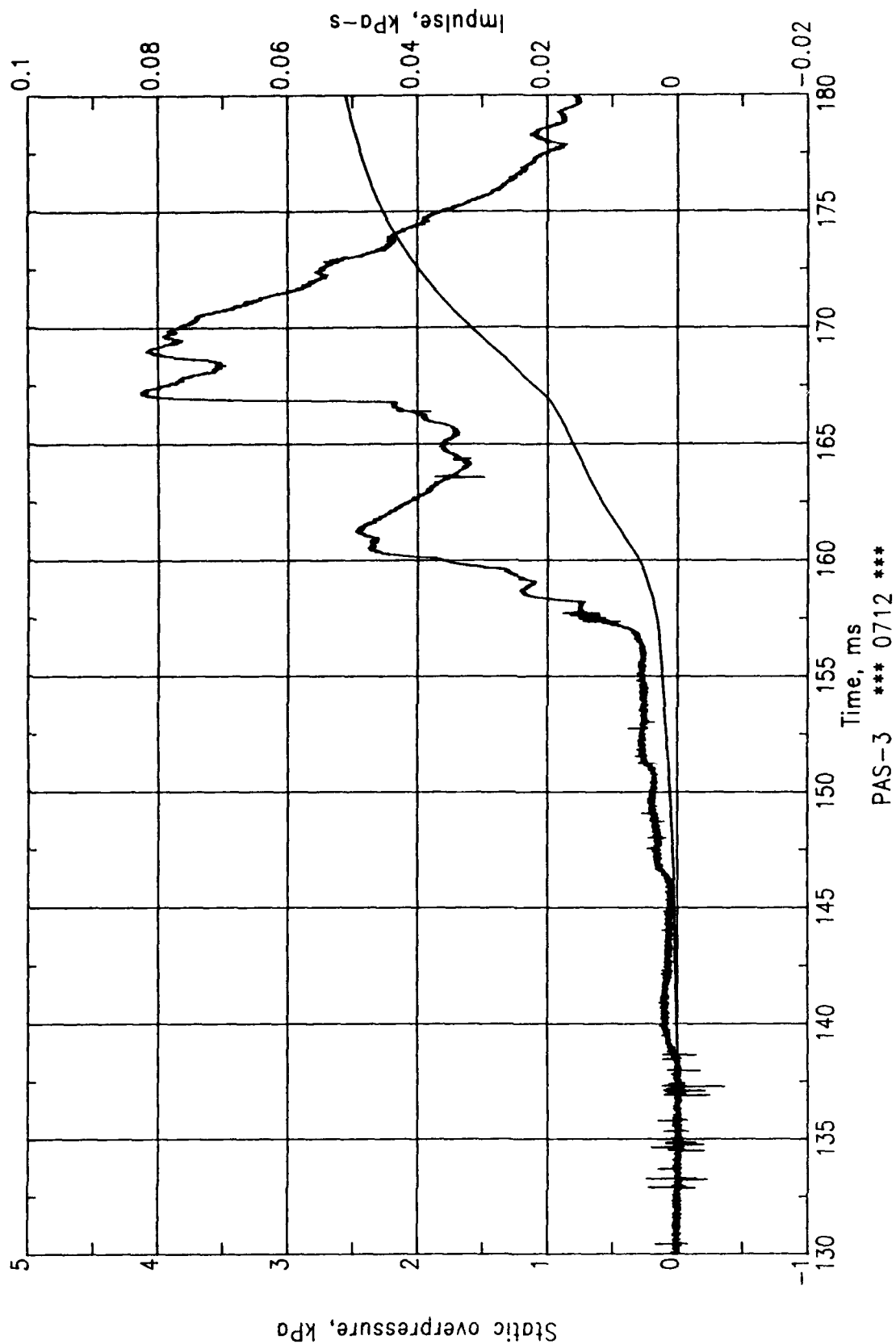
PAS-3 *** 0709 ***

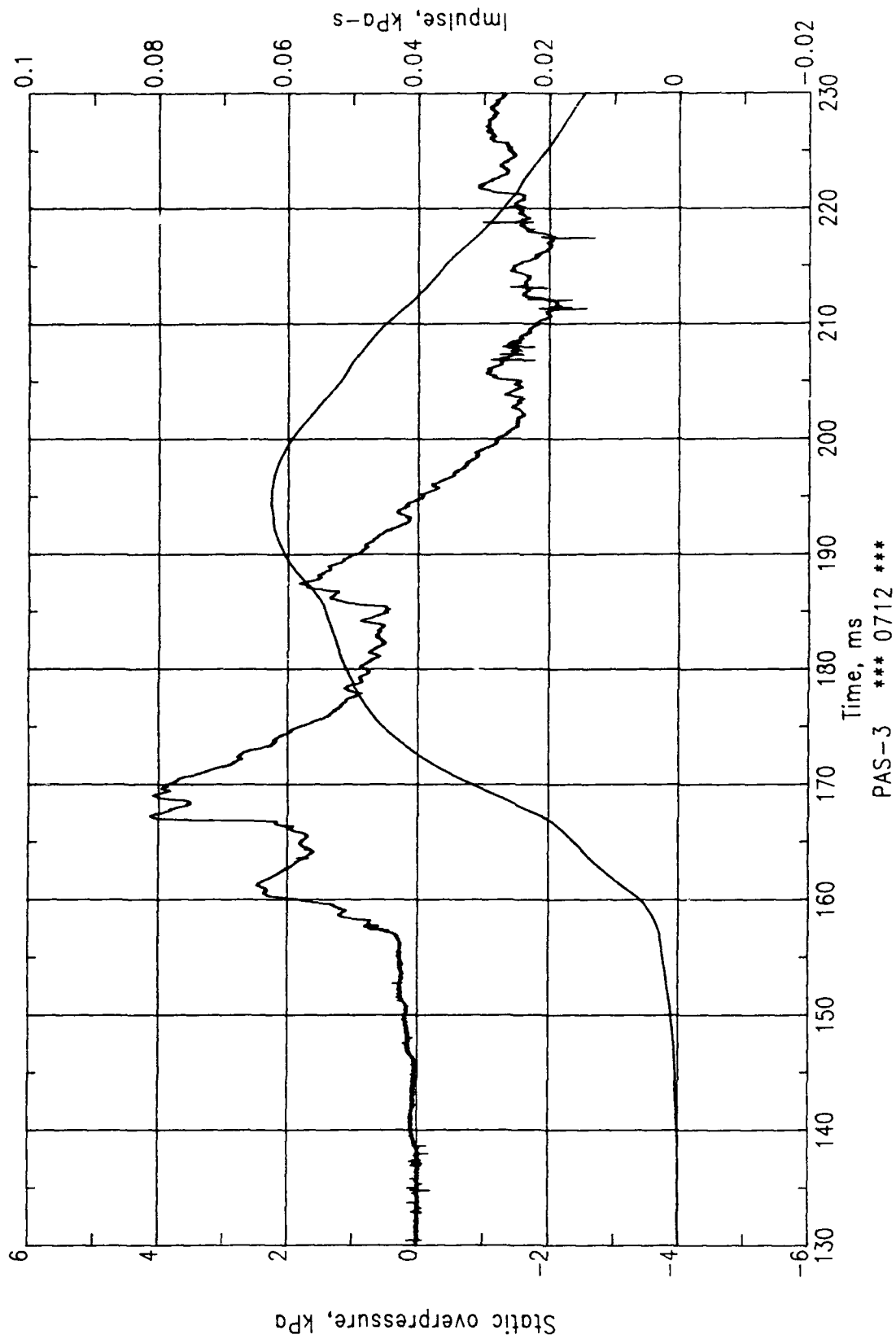


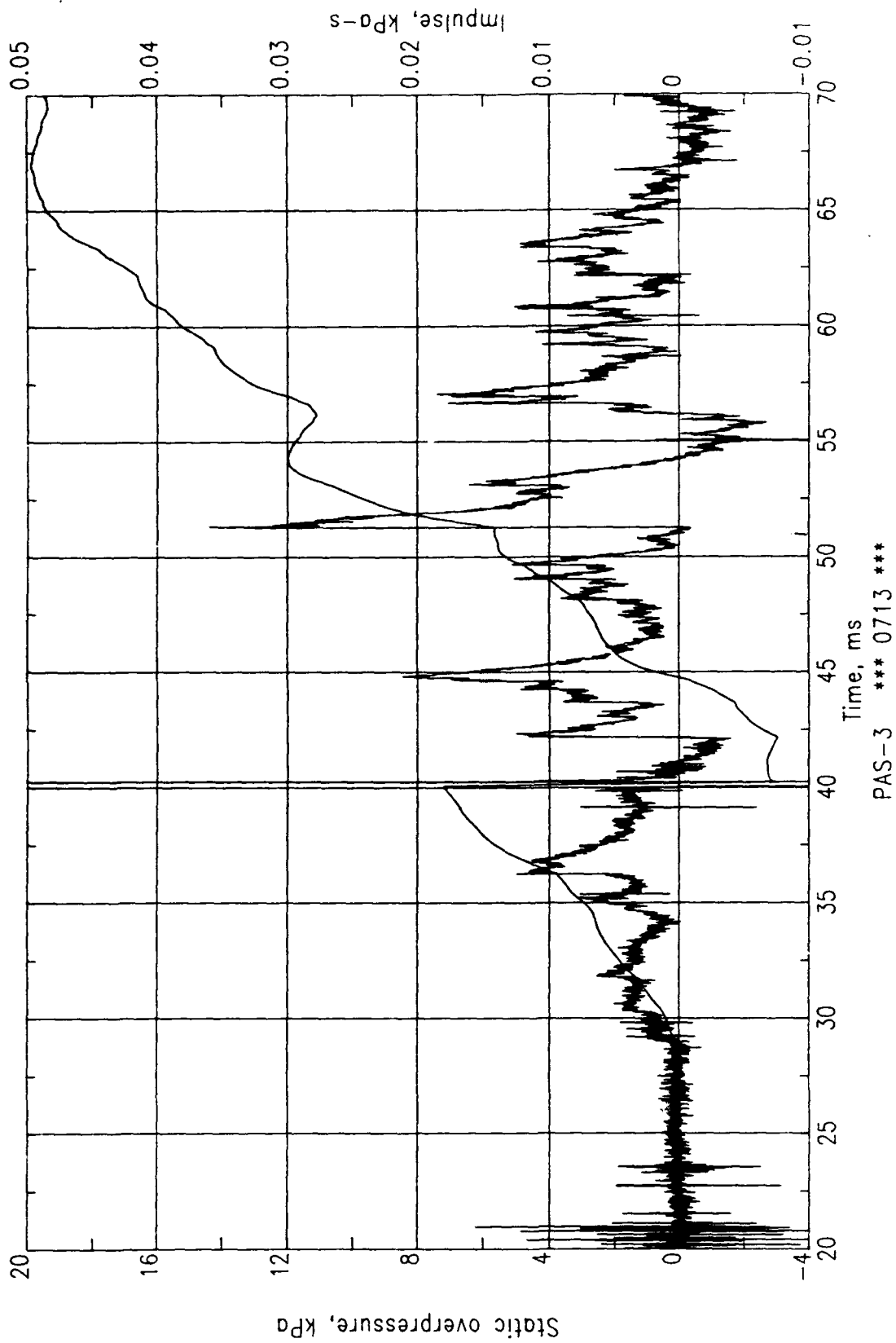


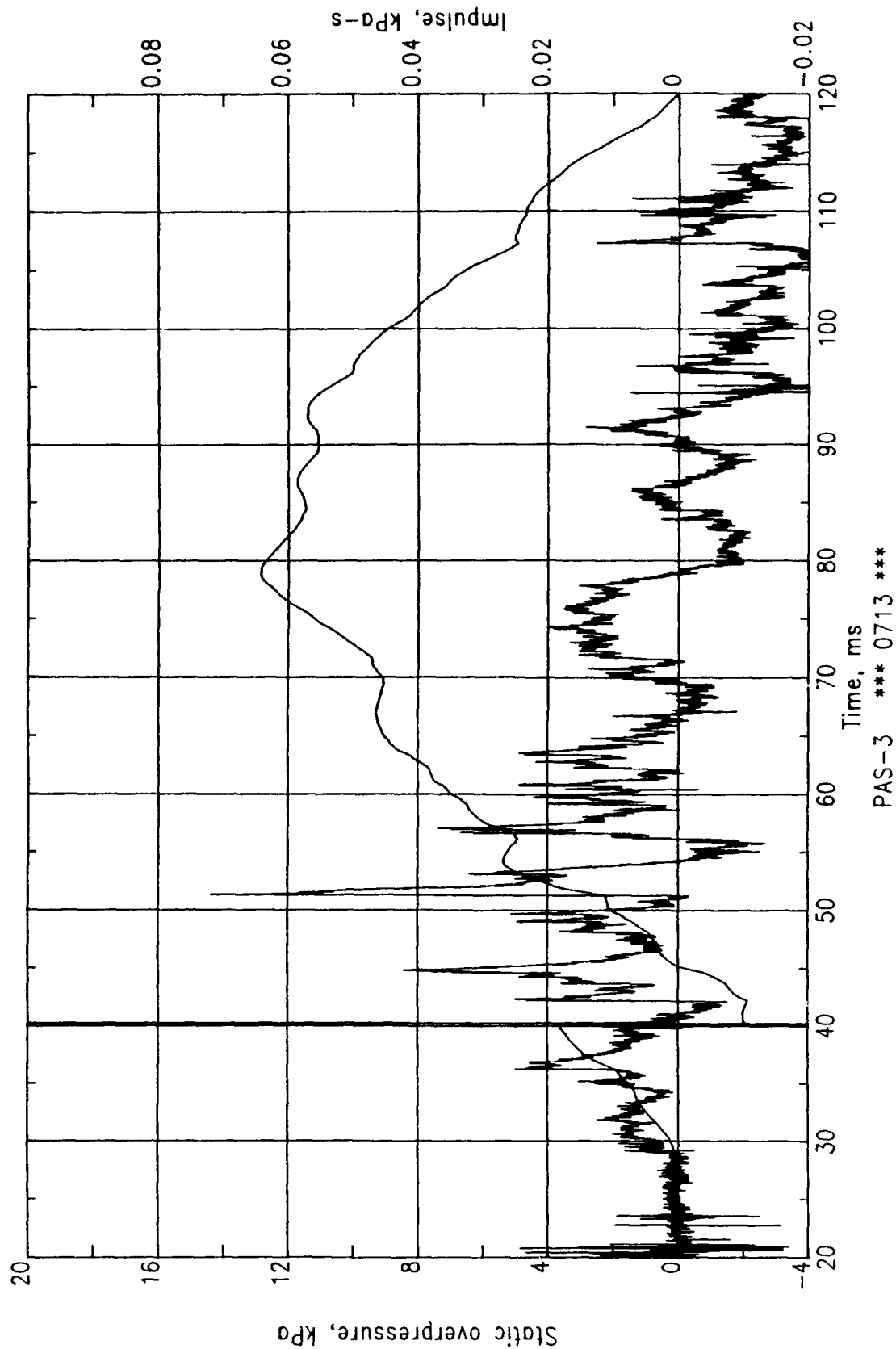


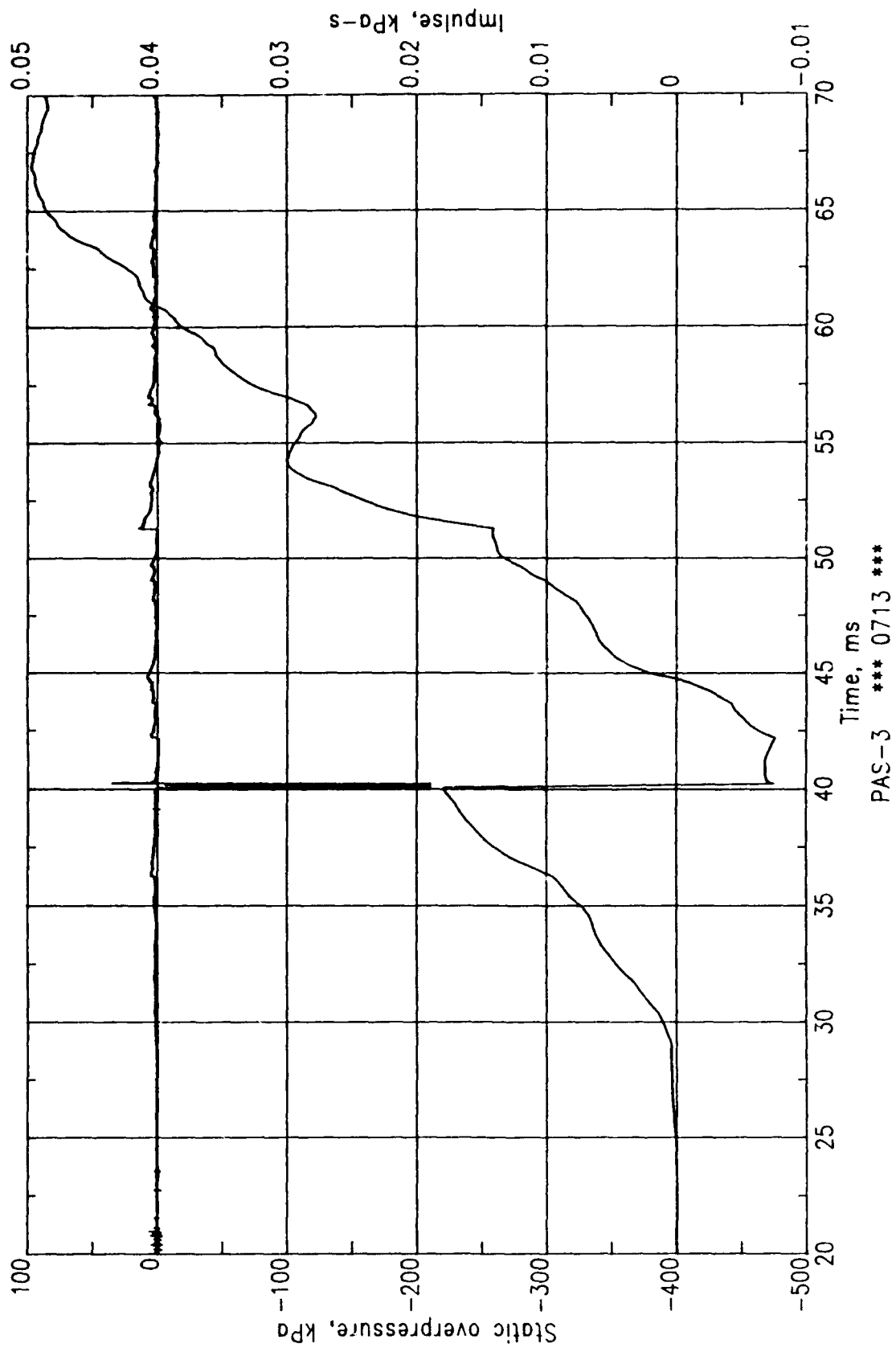


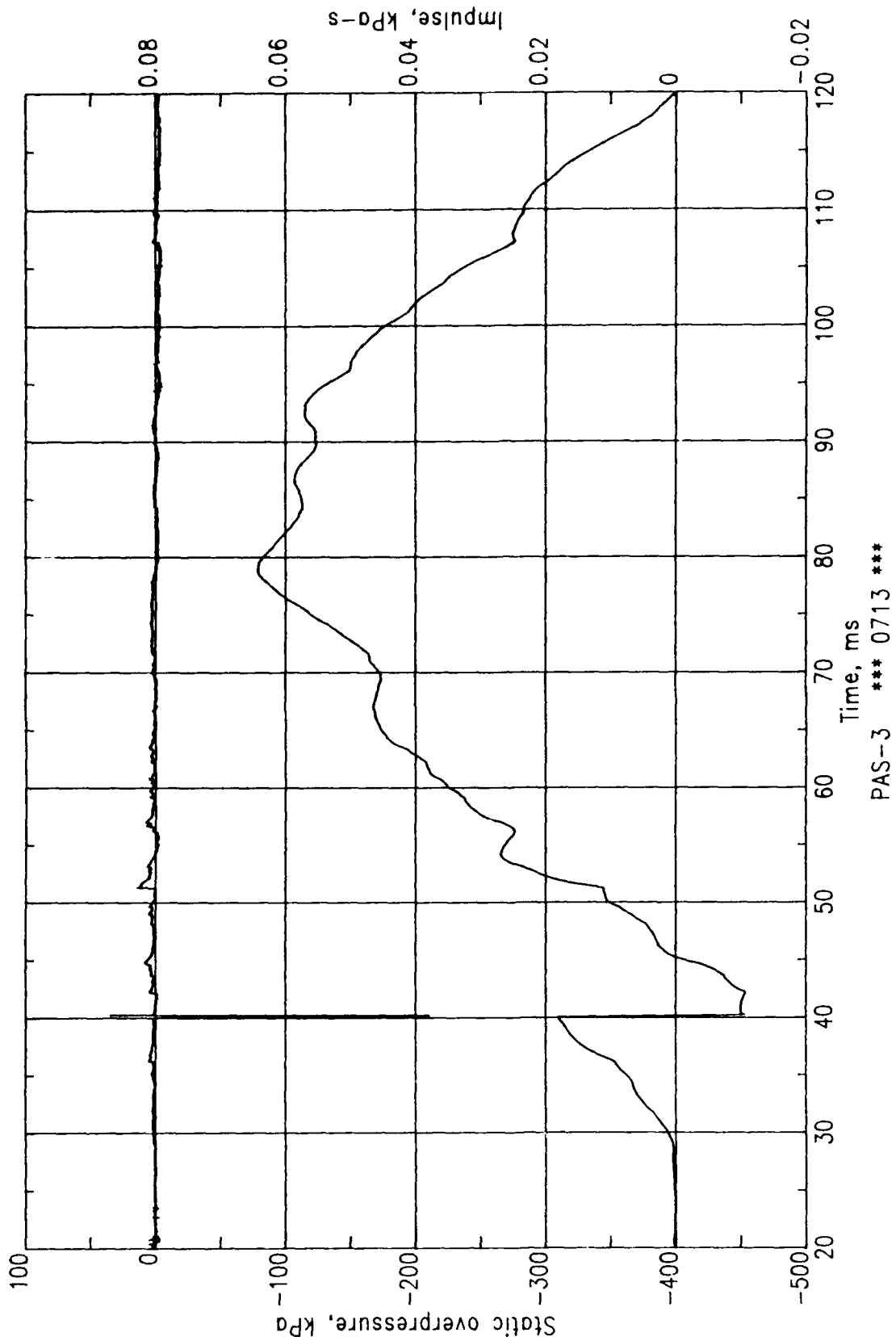


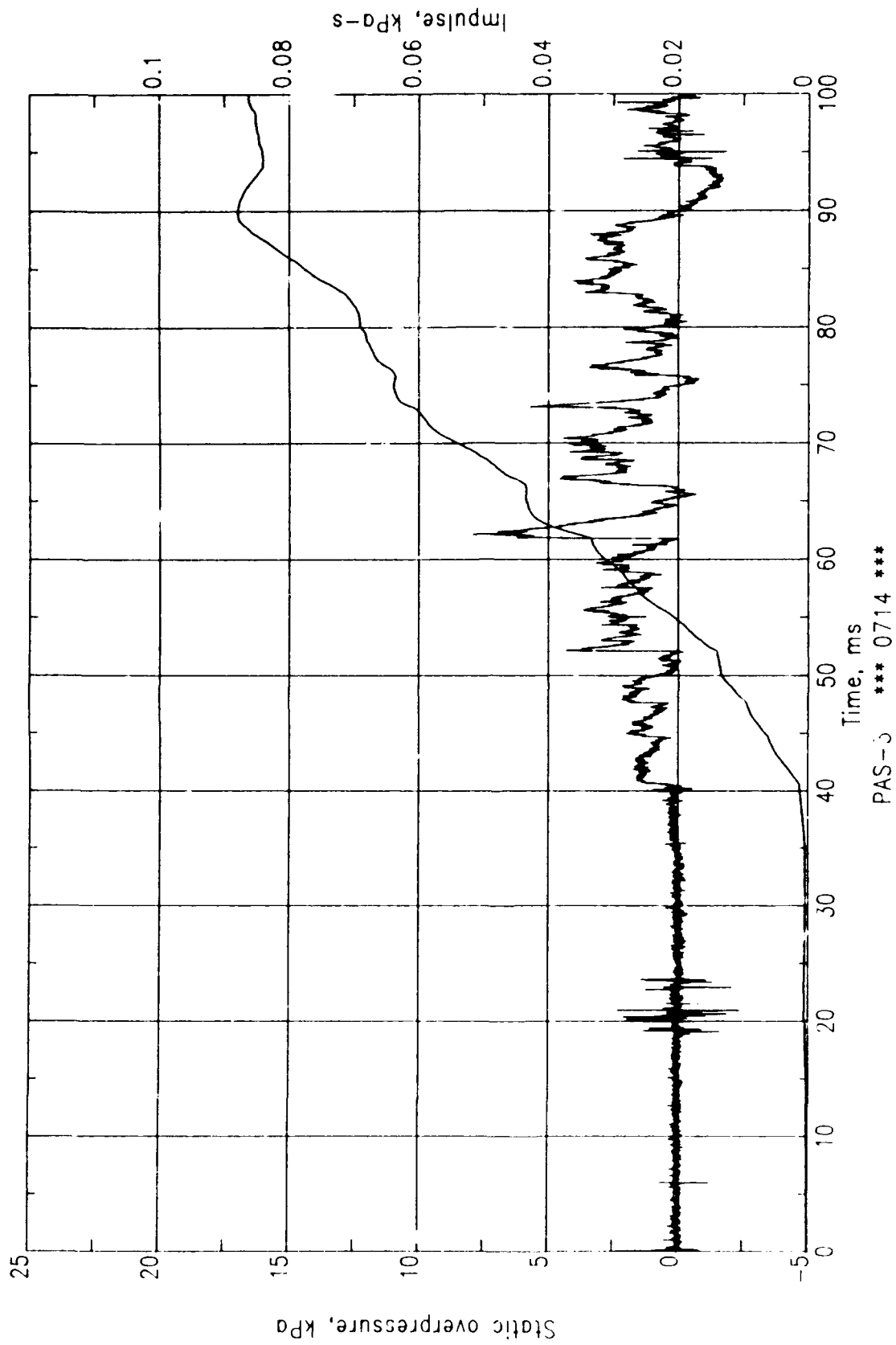


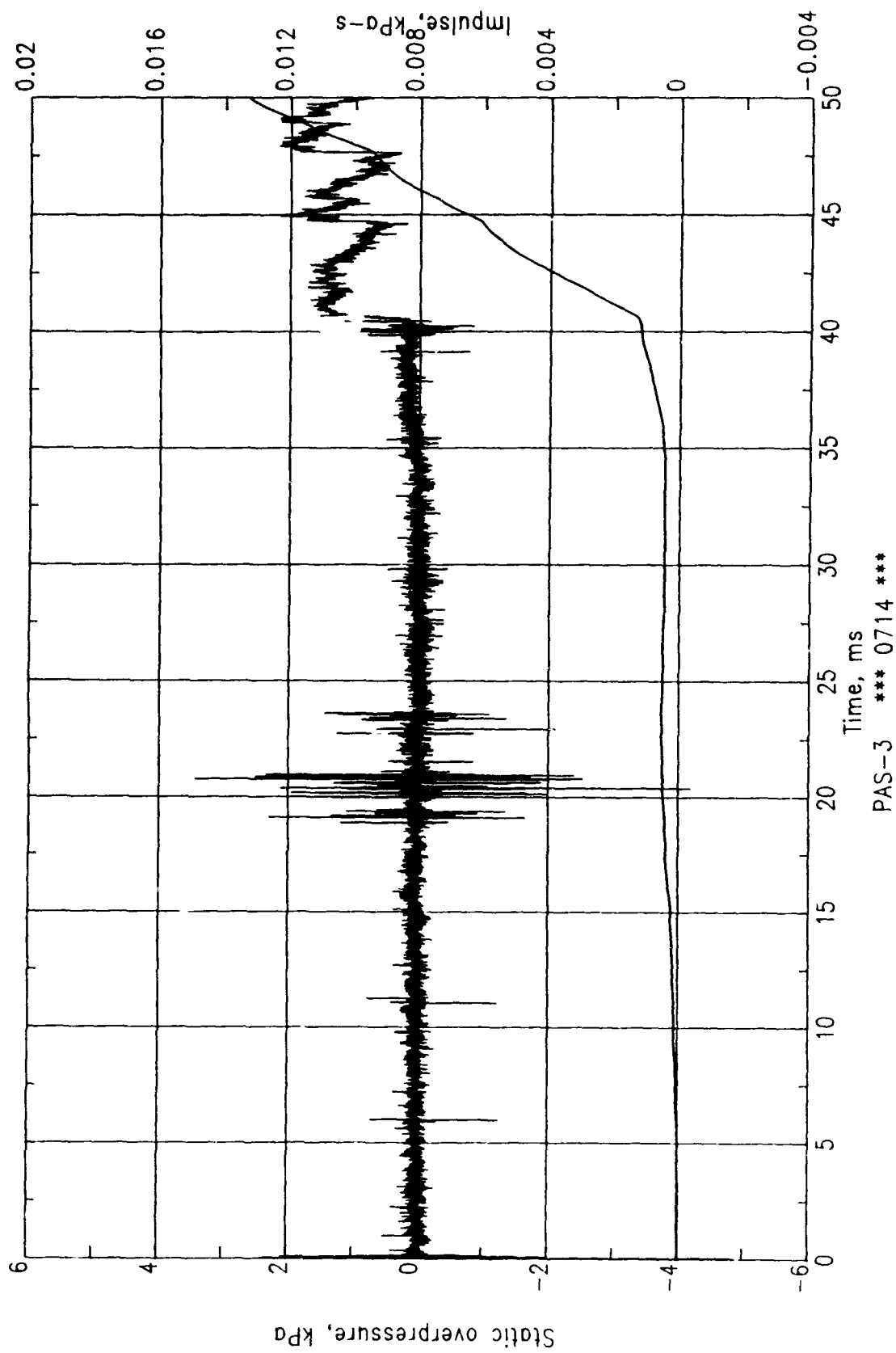


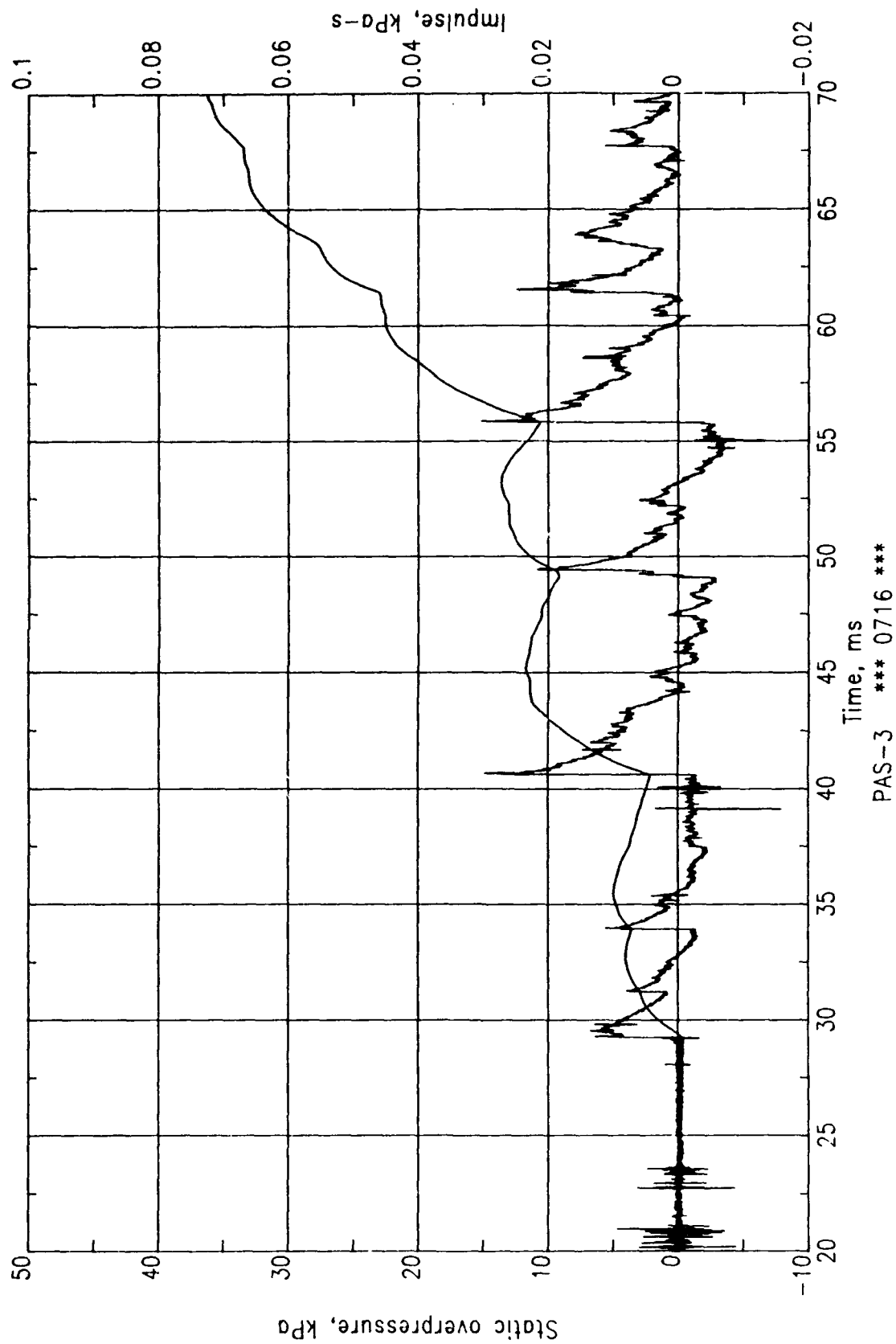


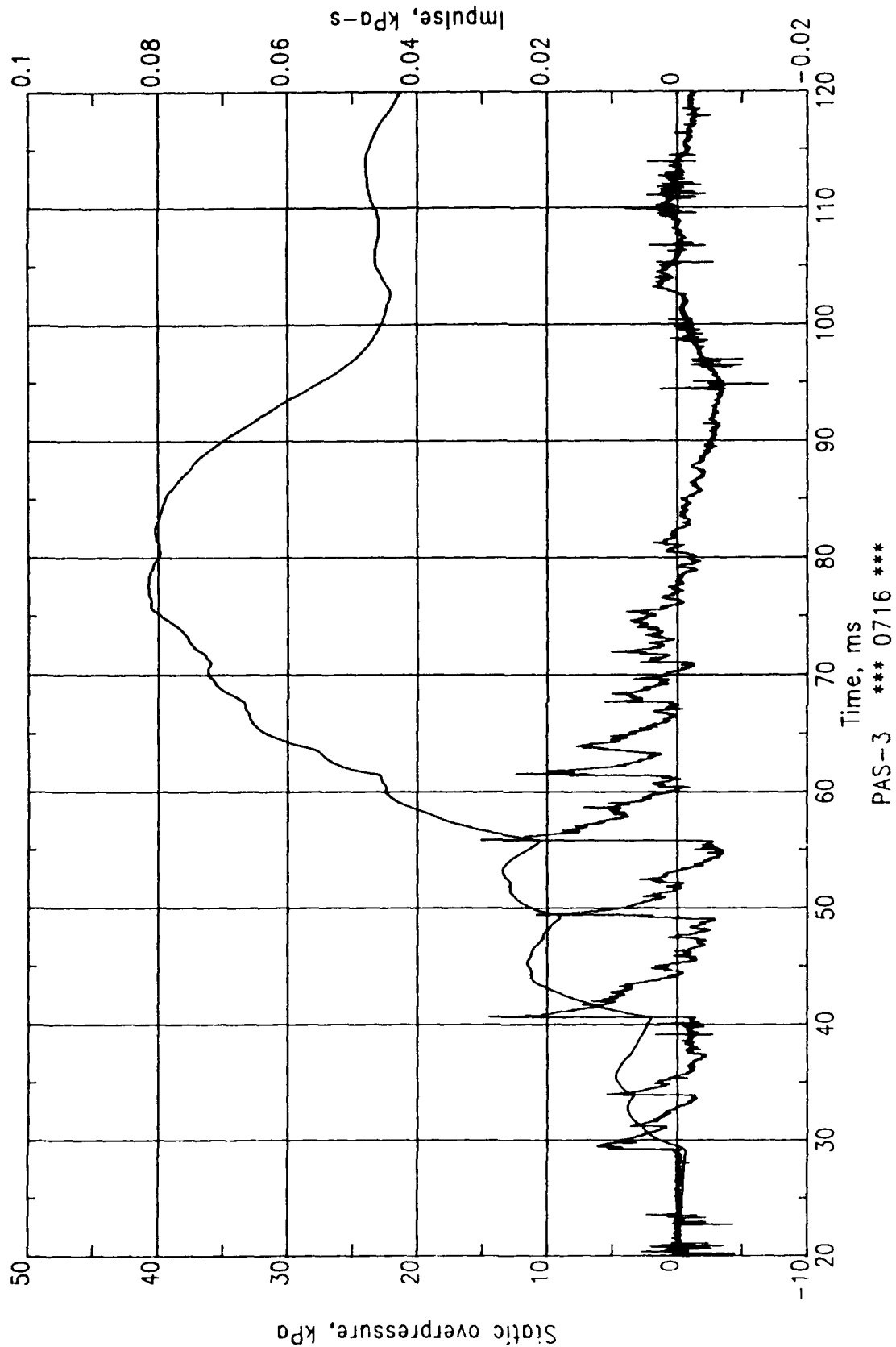


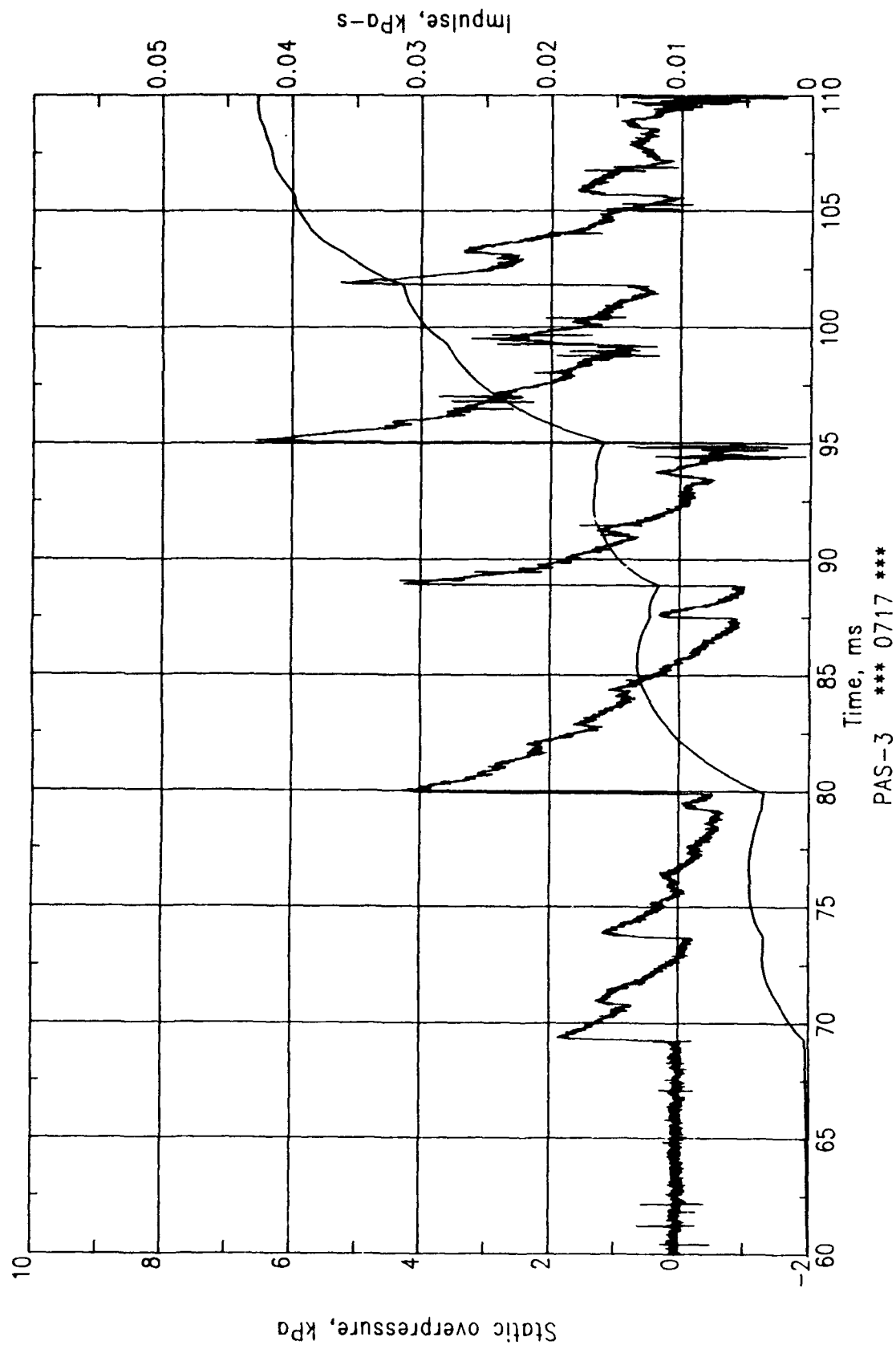




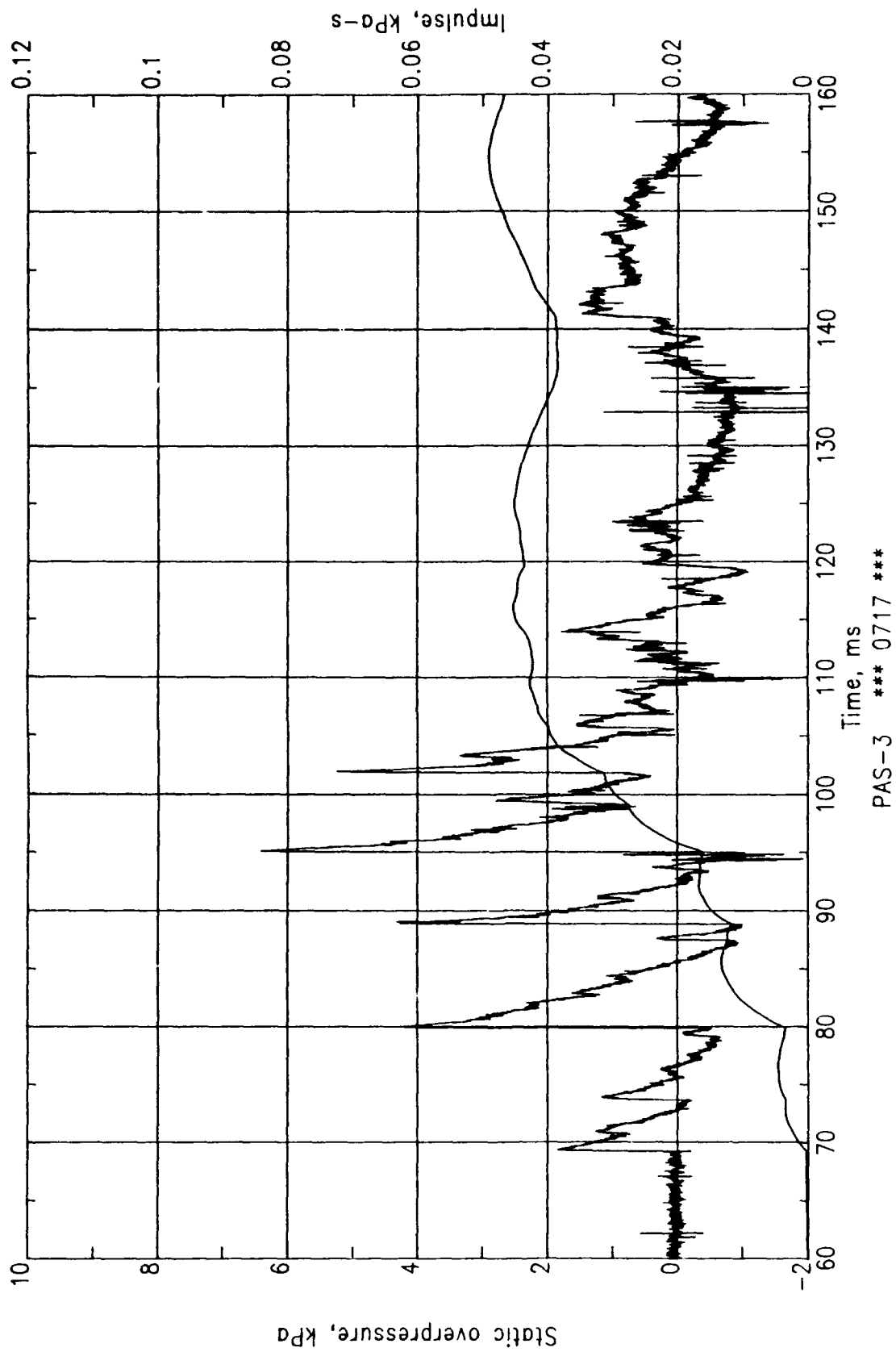


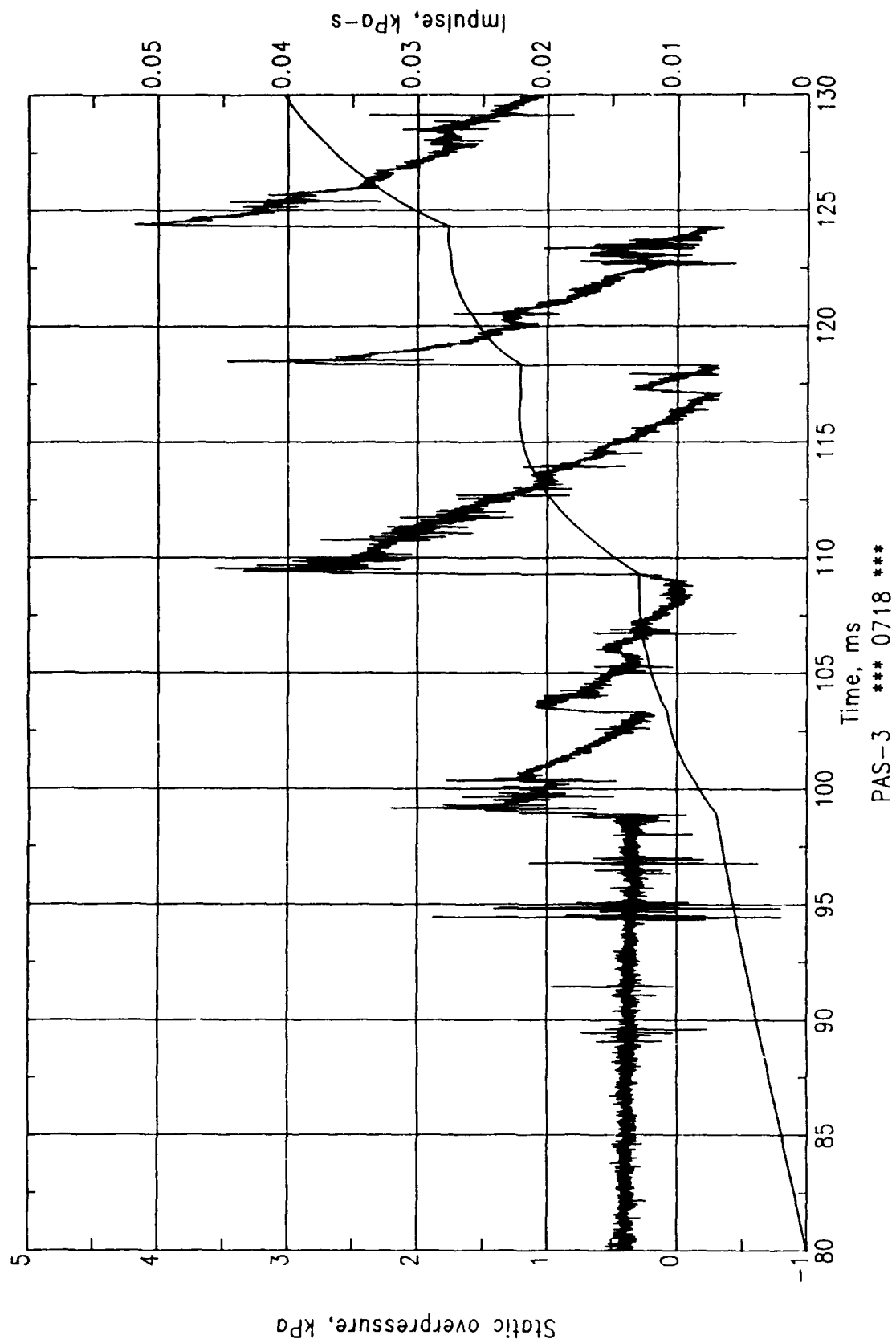


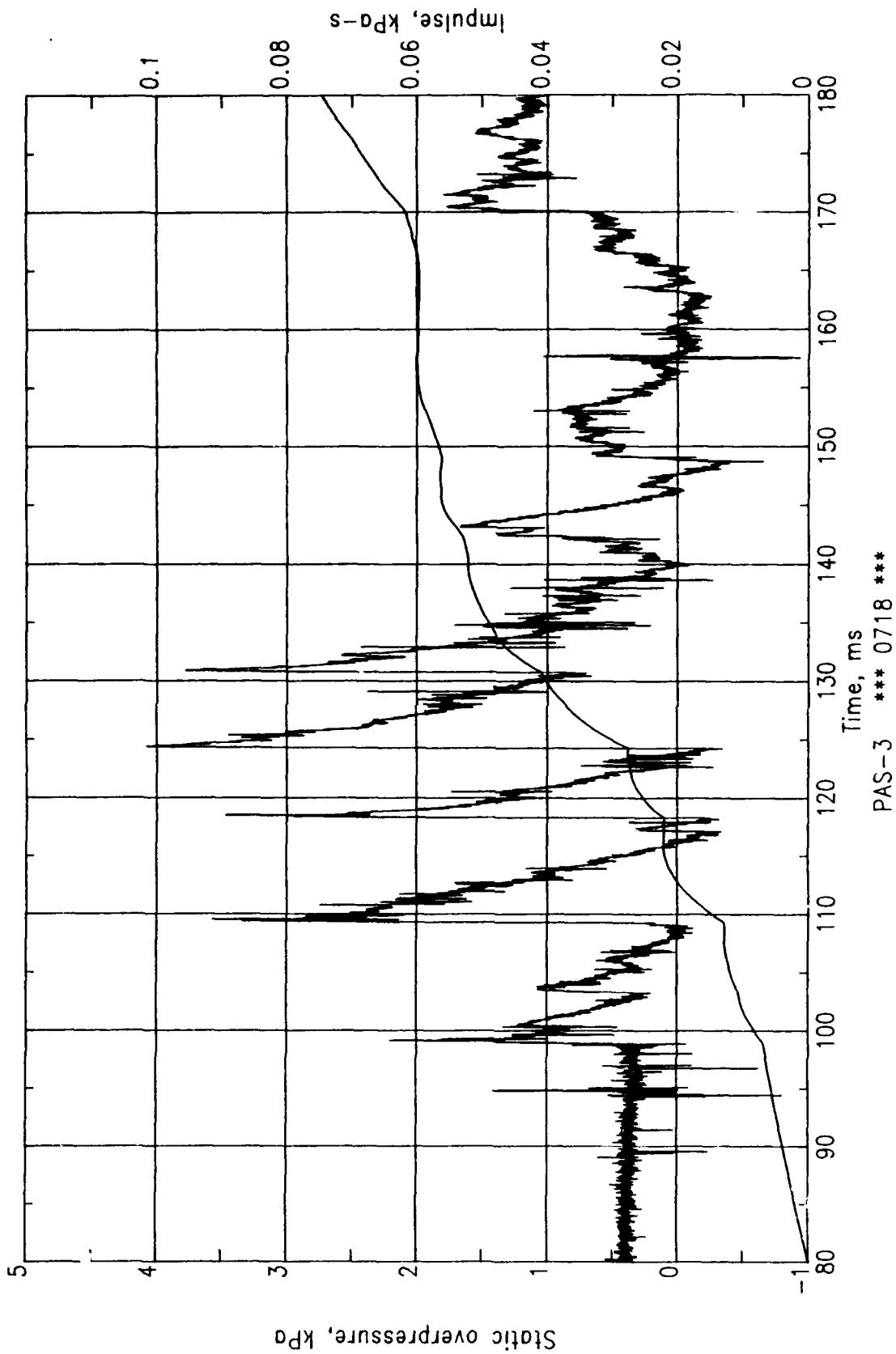


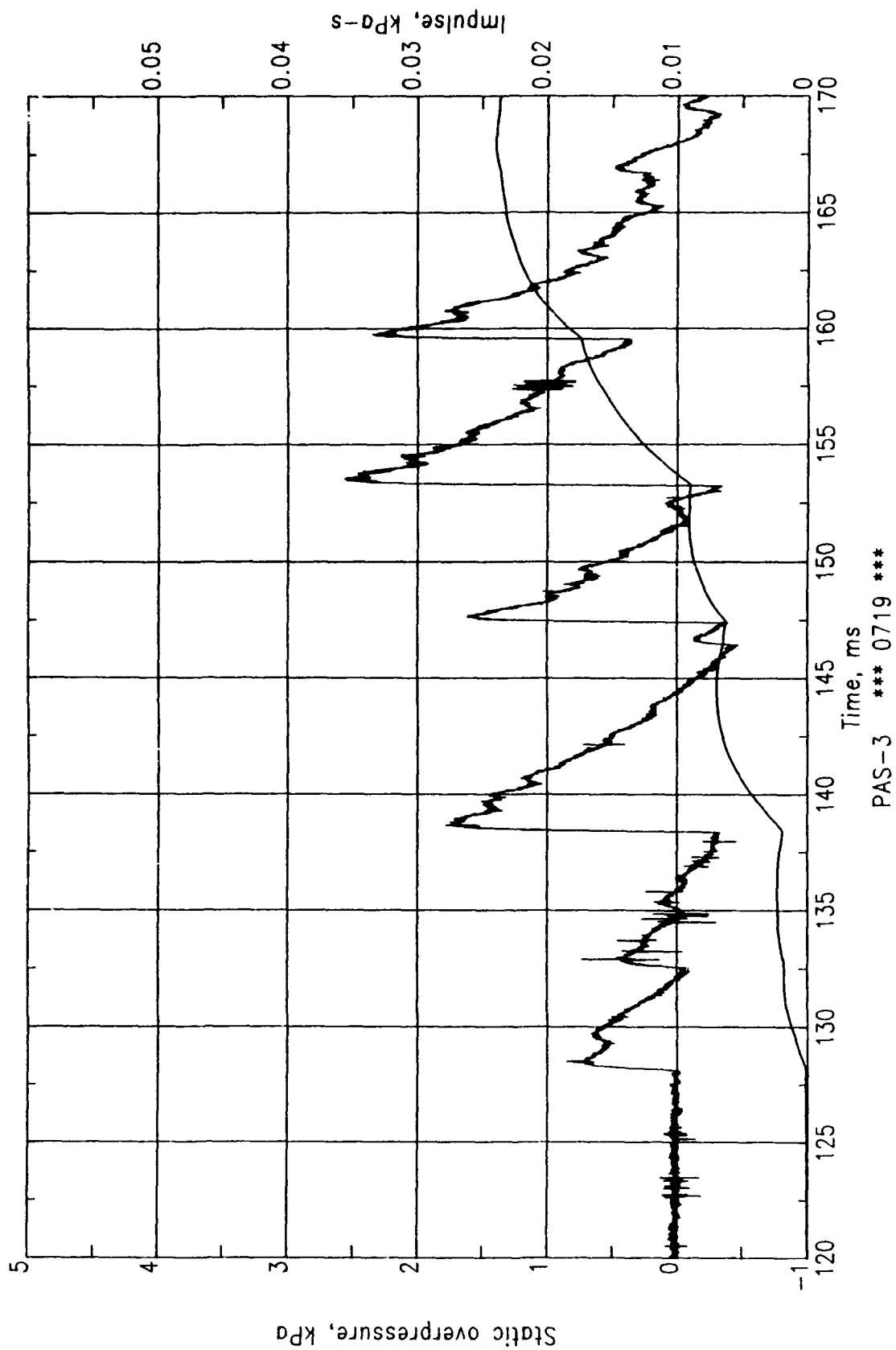


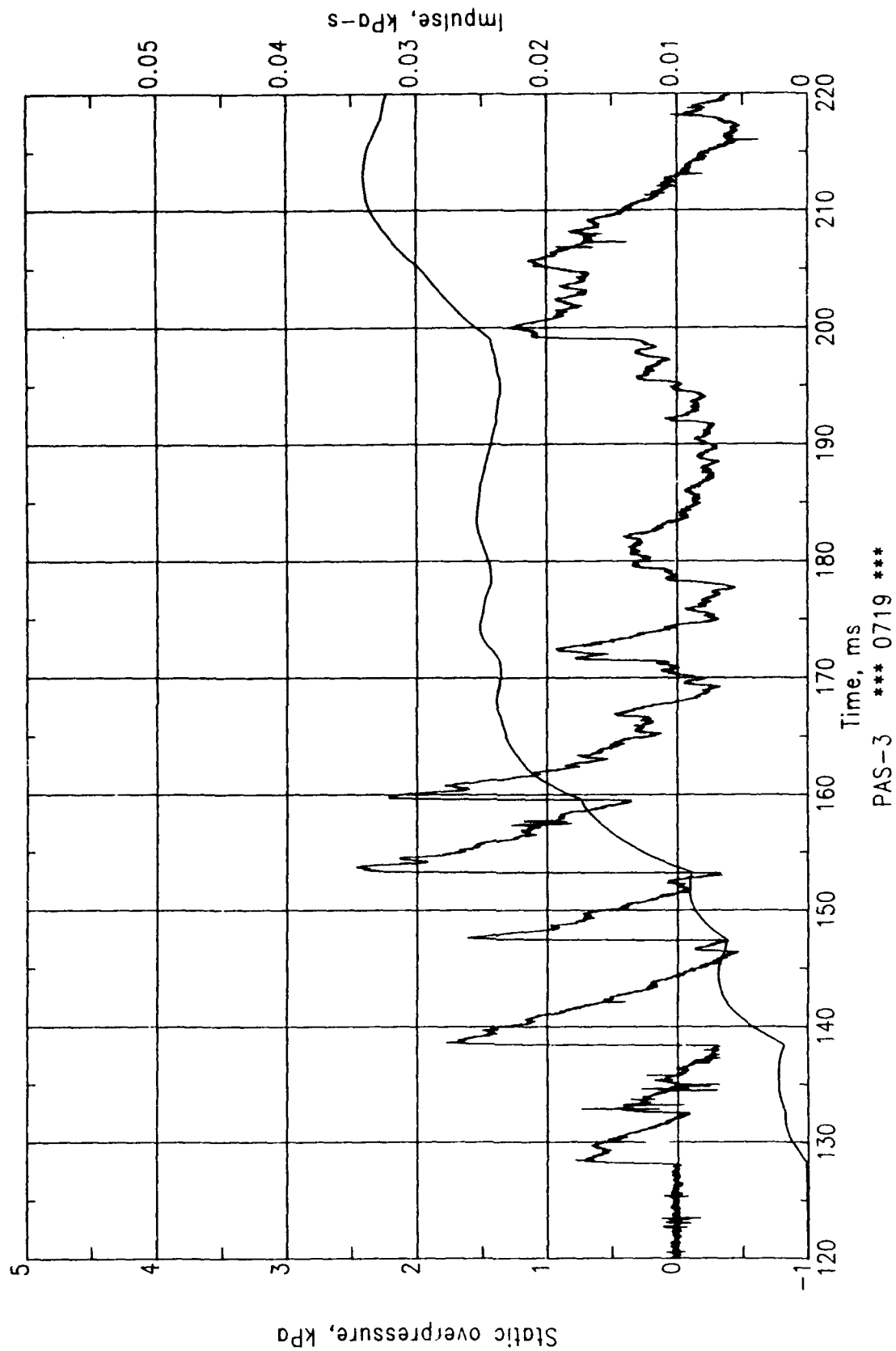
PAS-3 *** 0717 ***

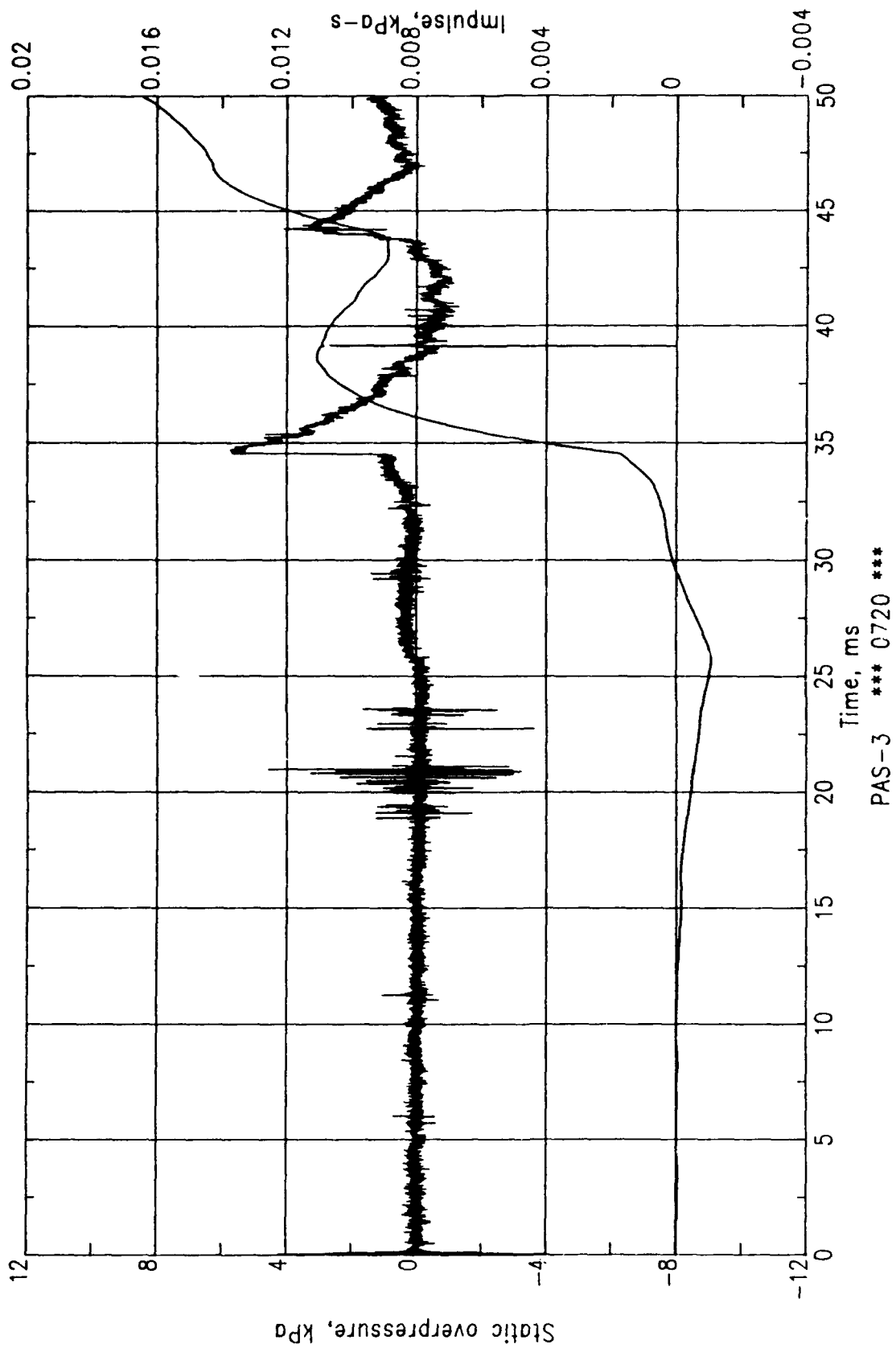


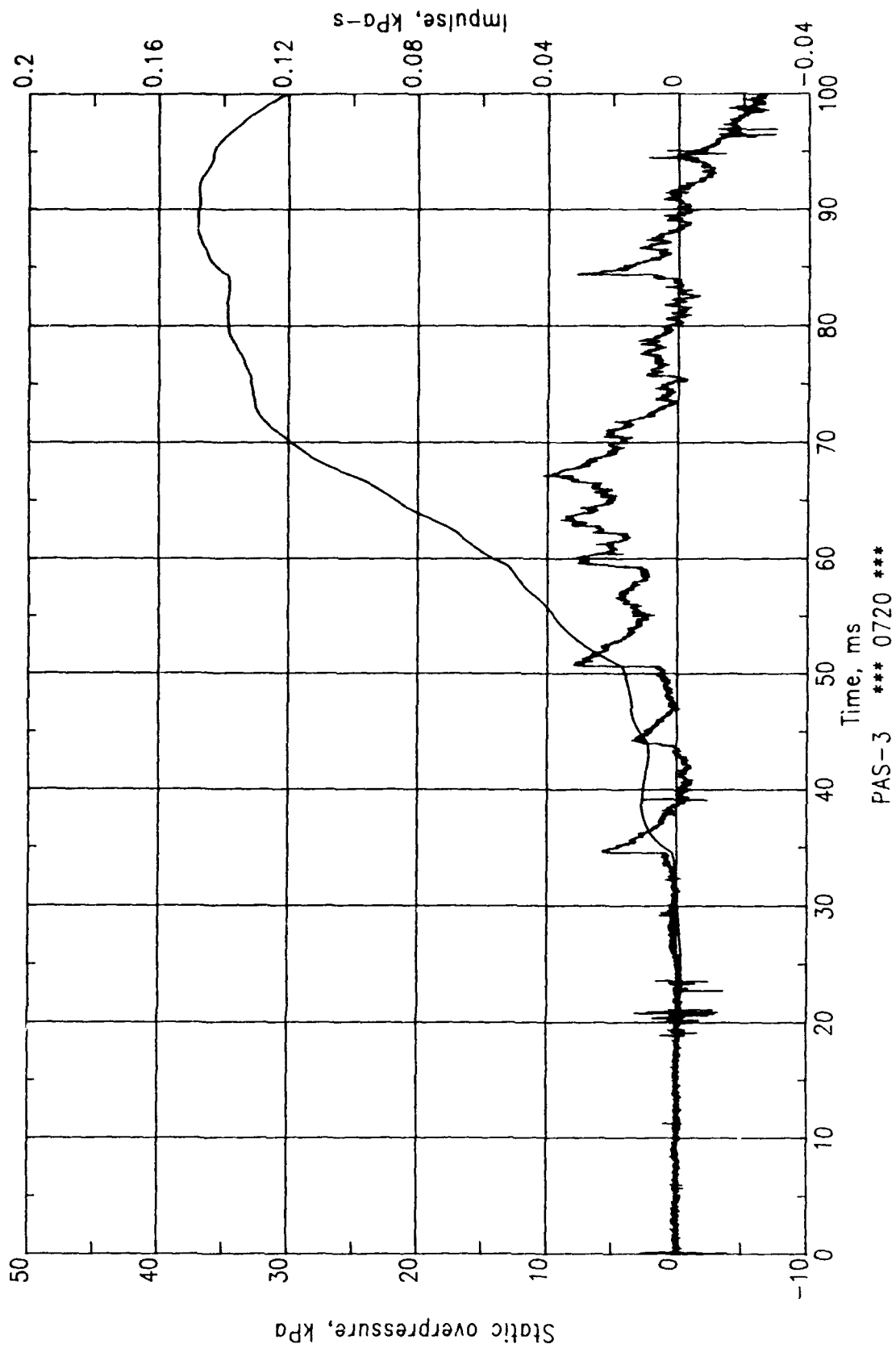


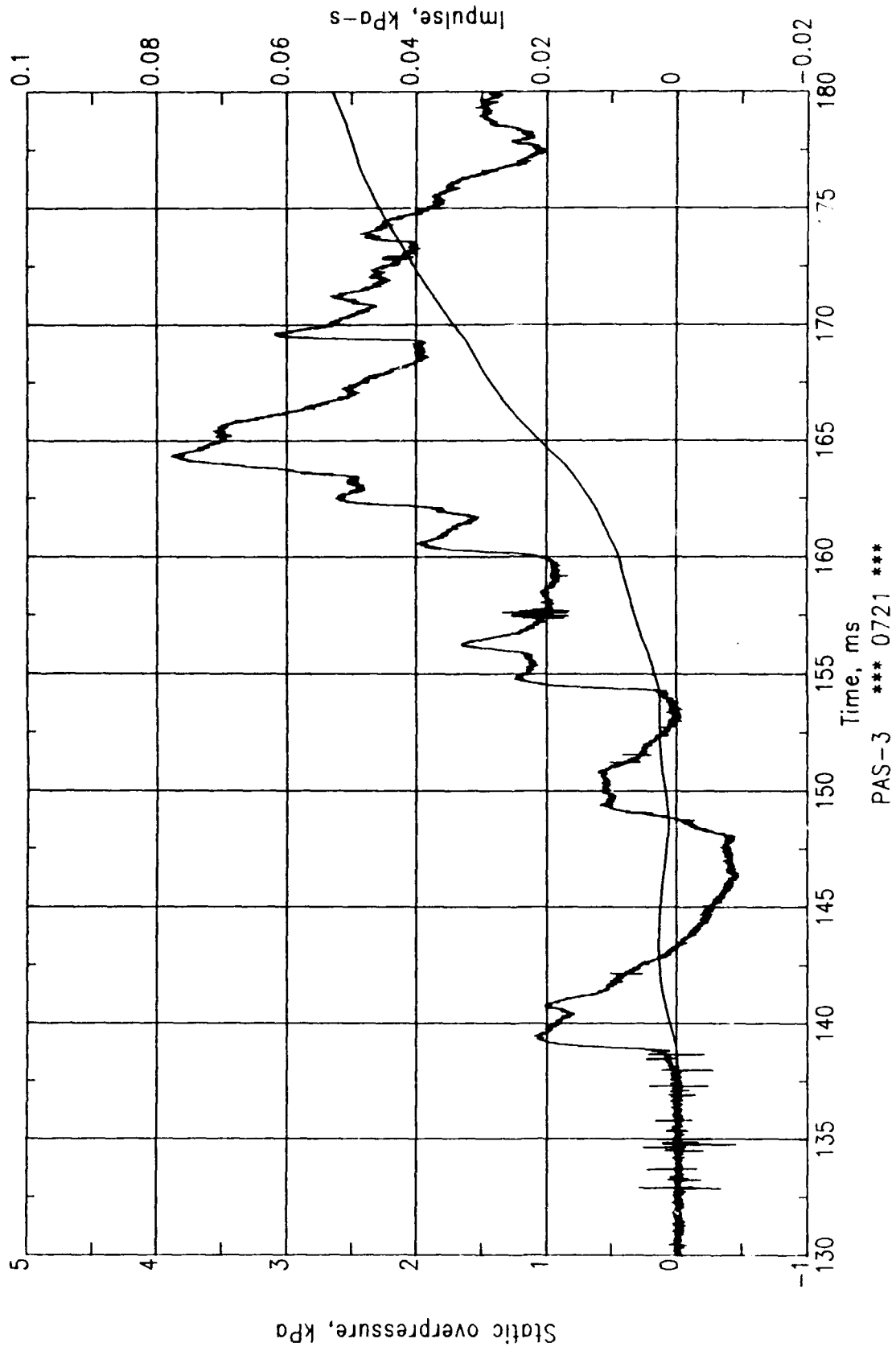


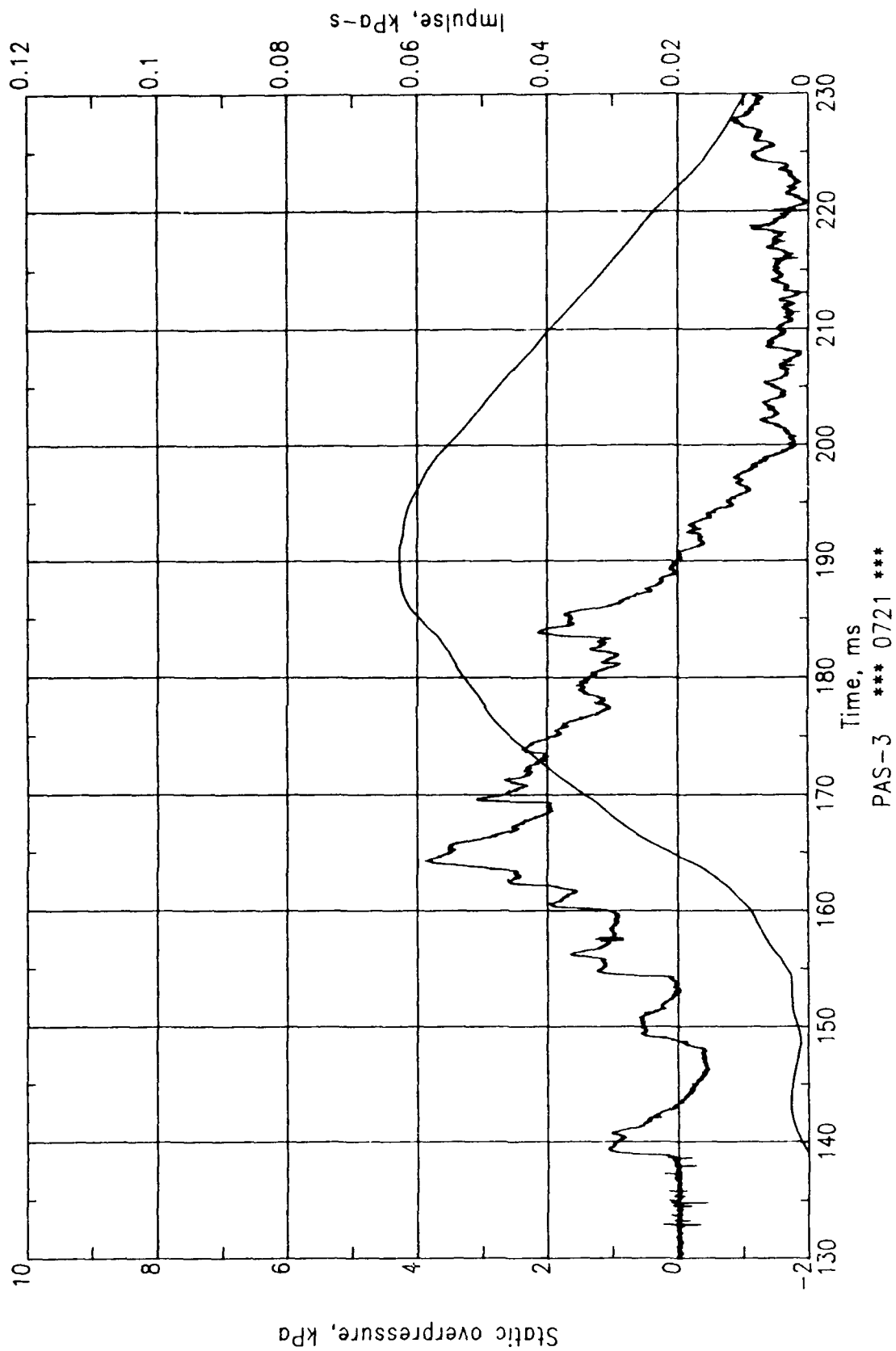


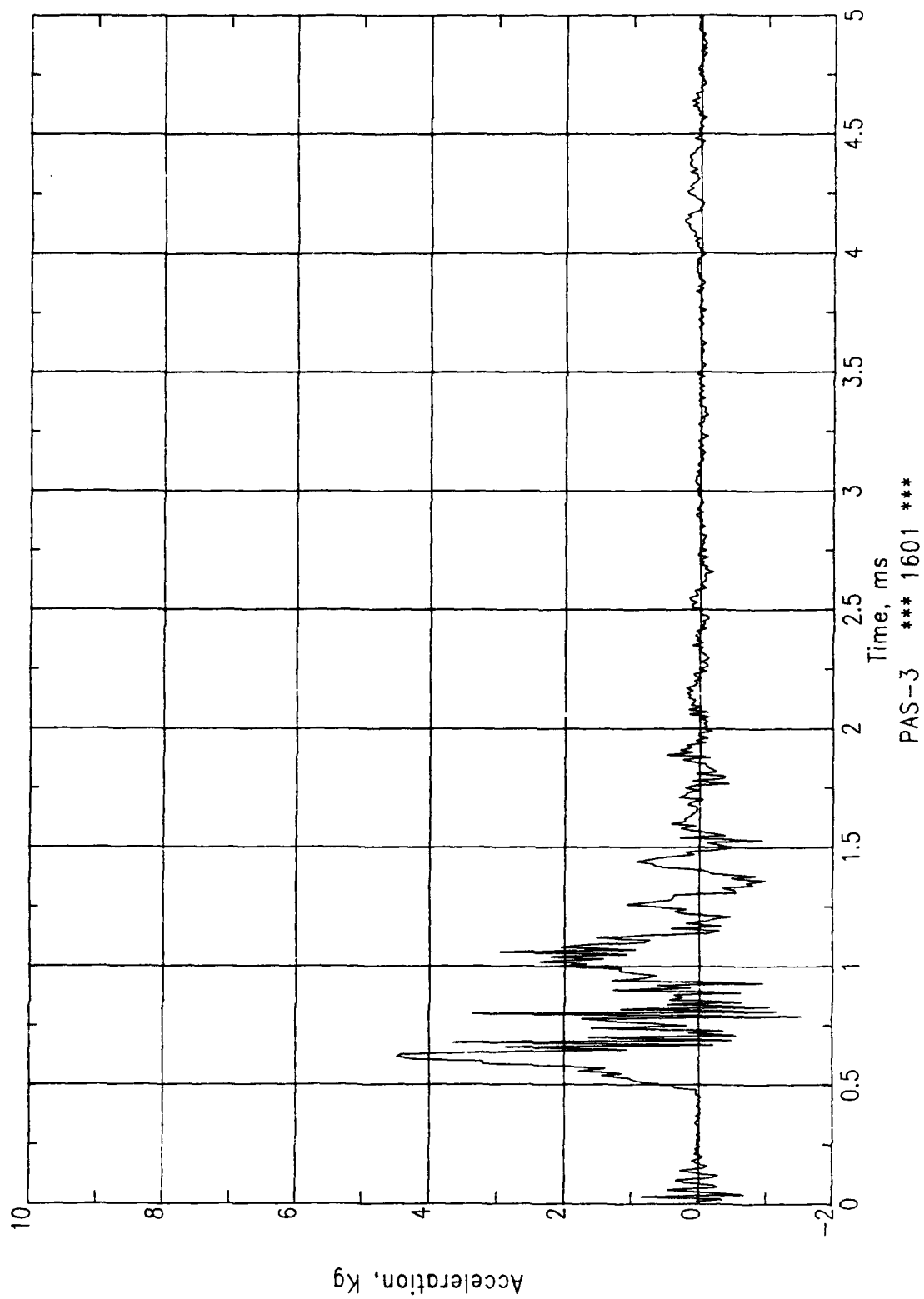


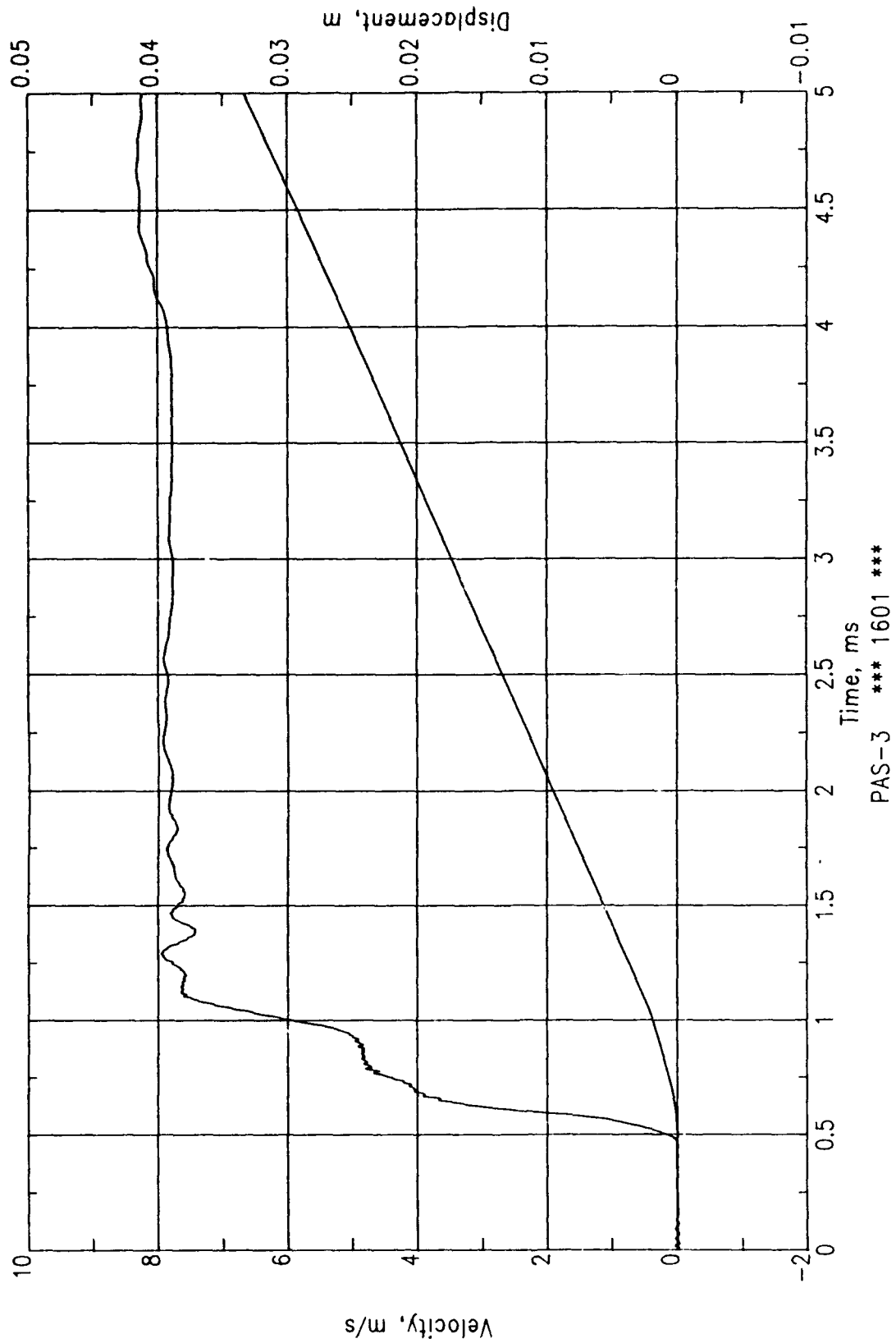


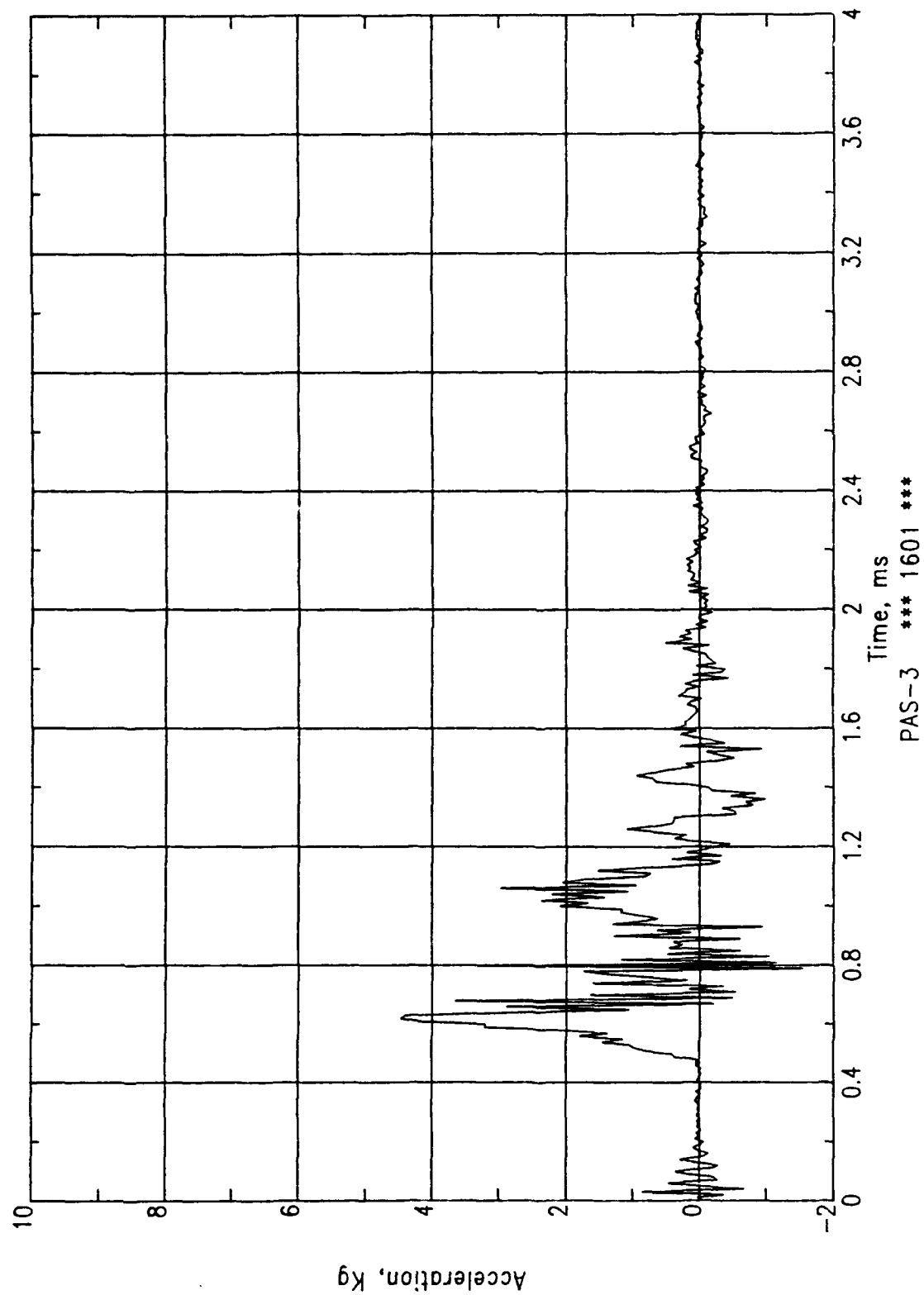


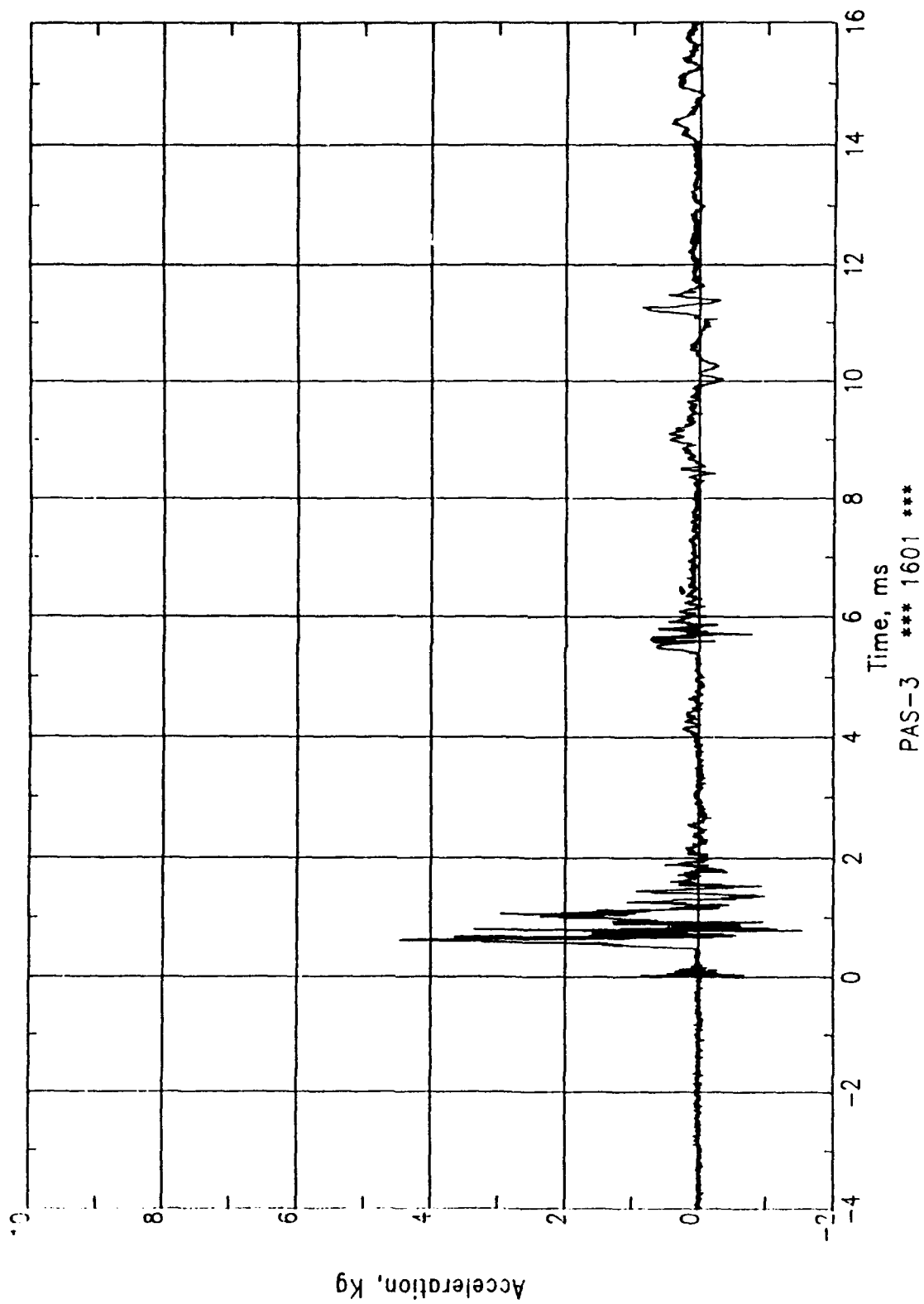


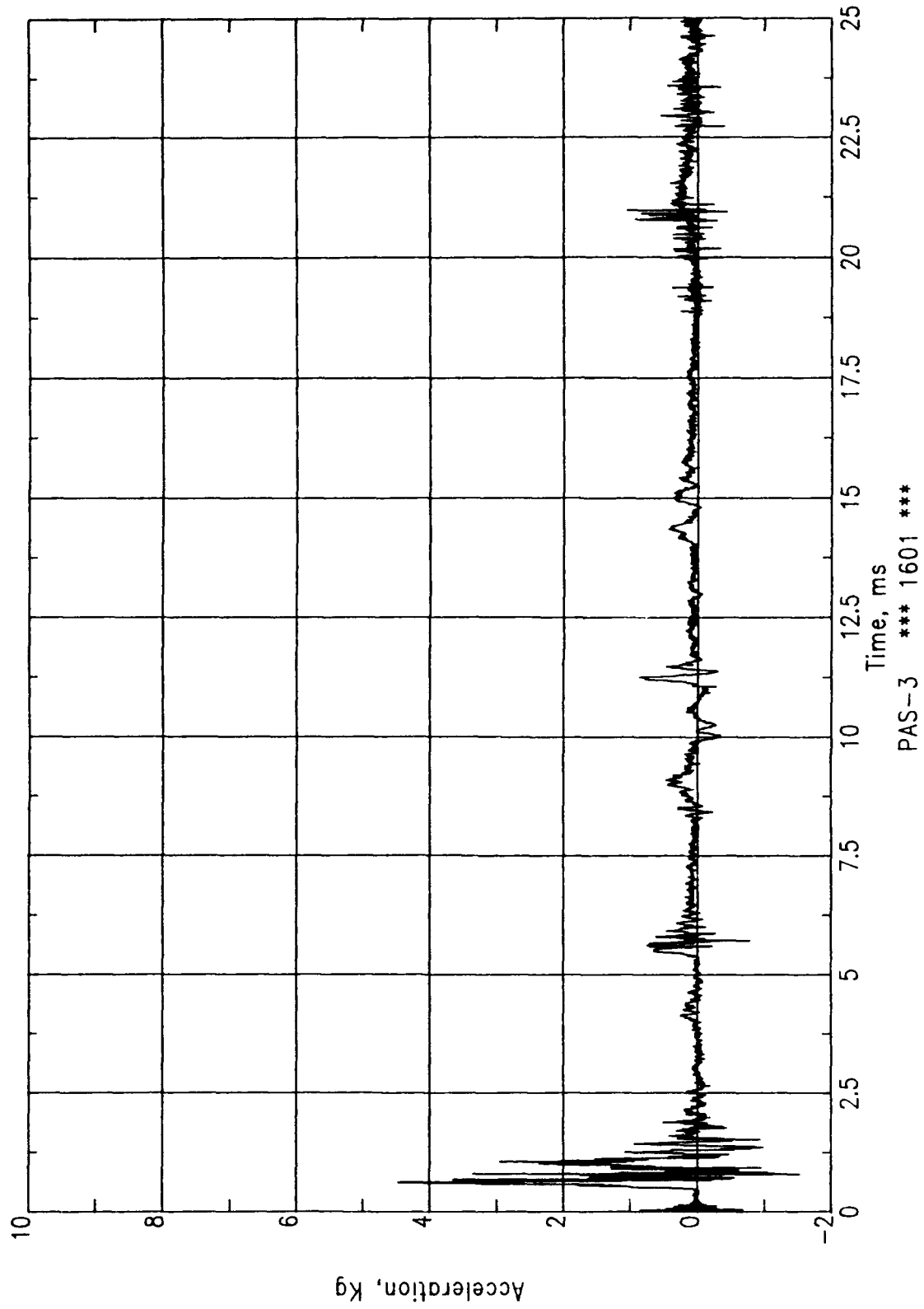


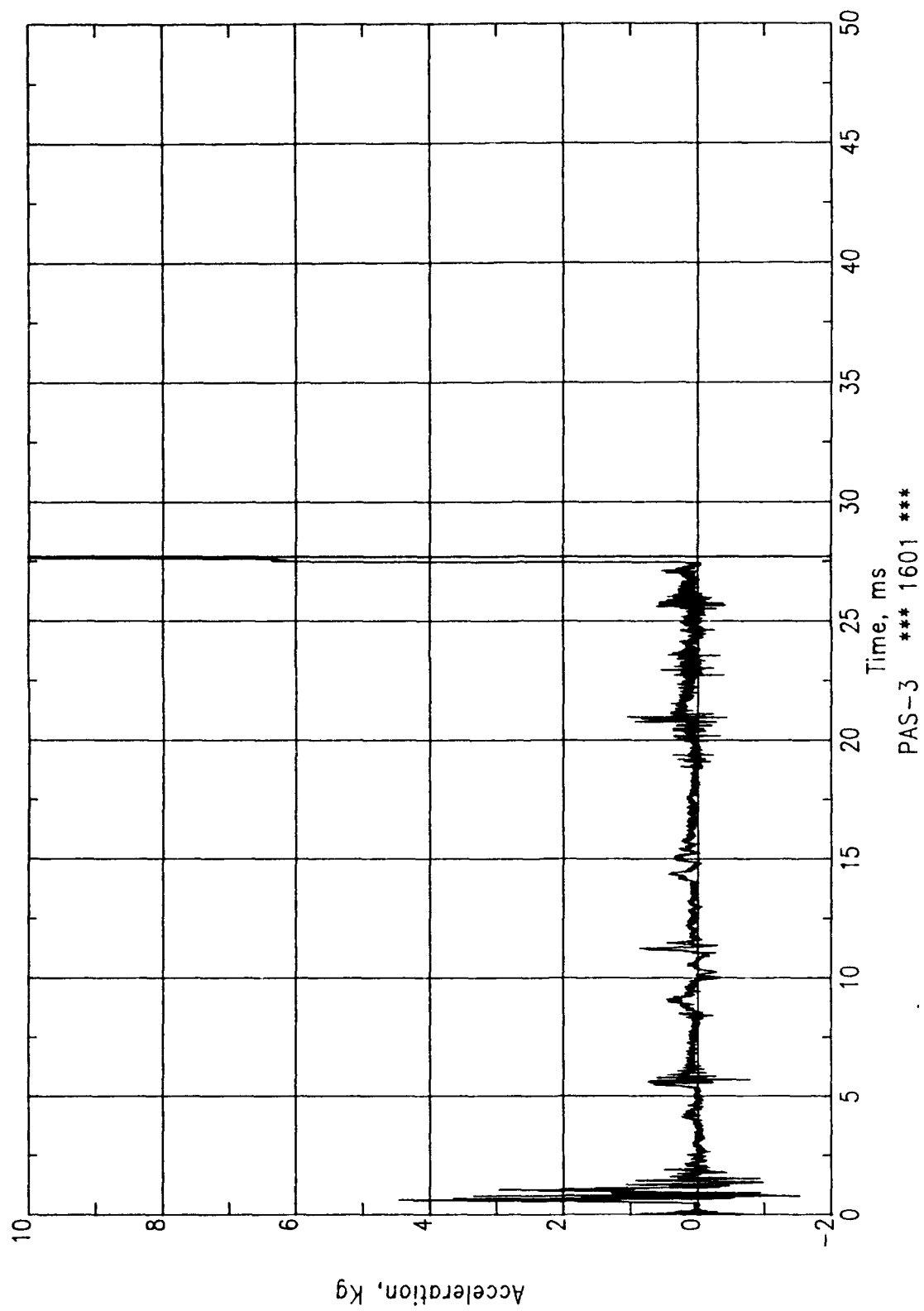


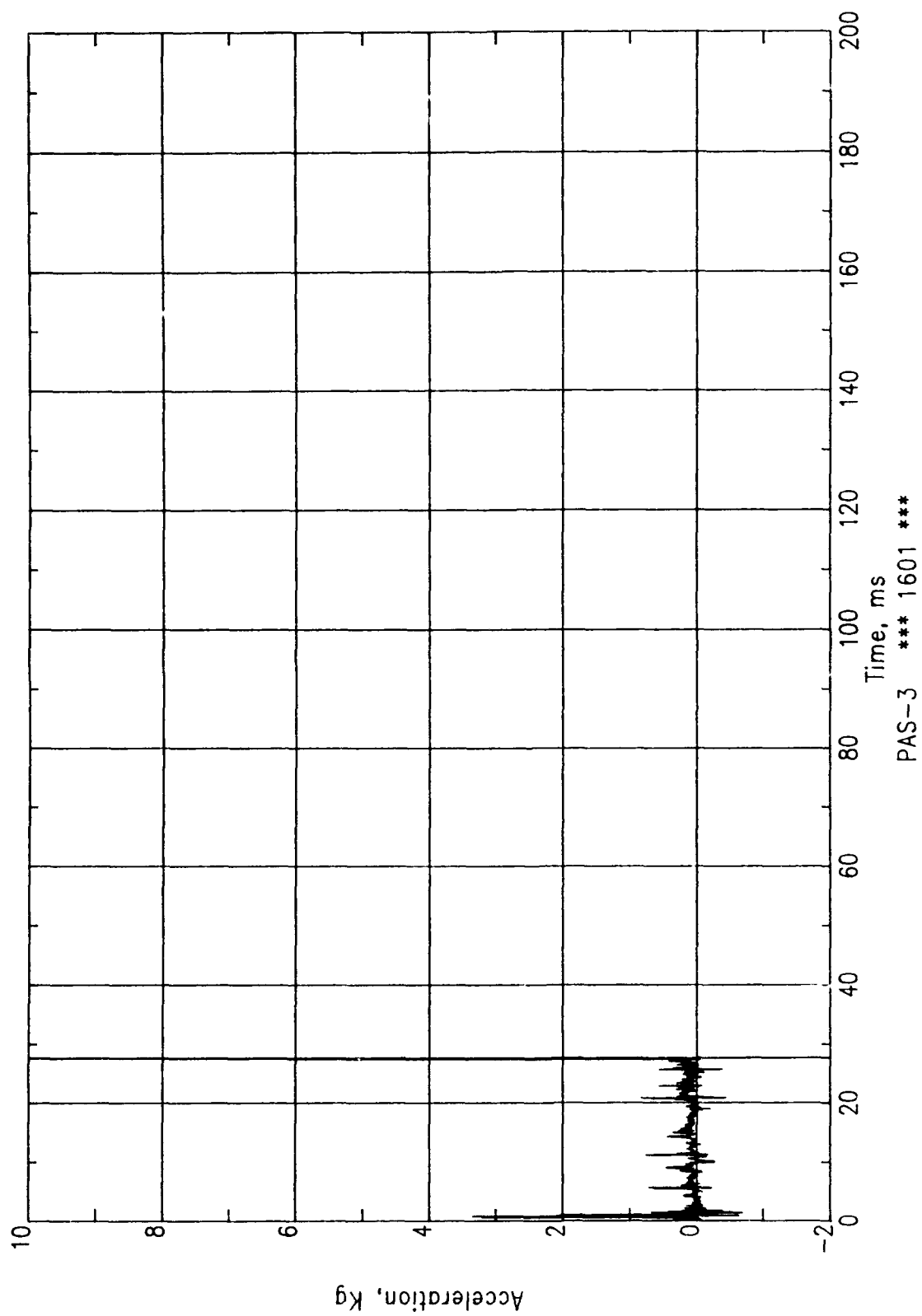


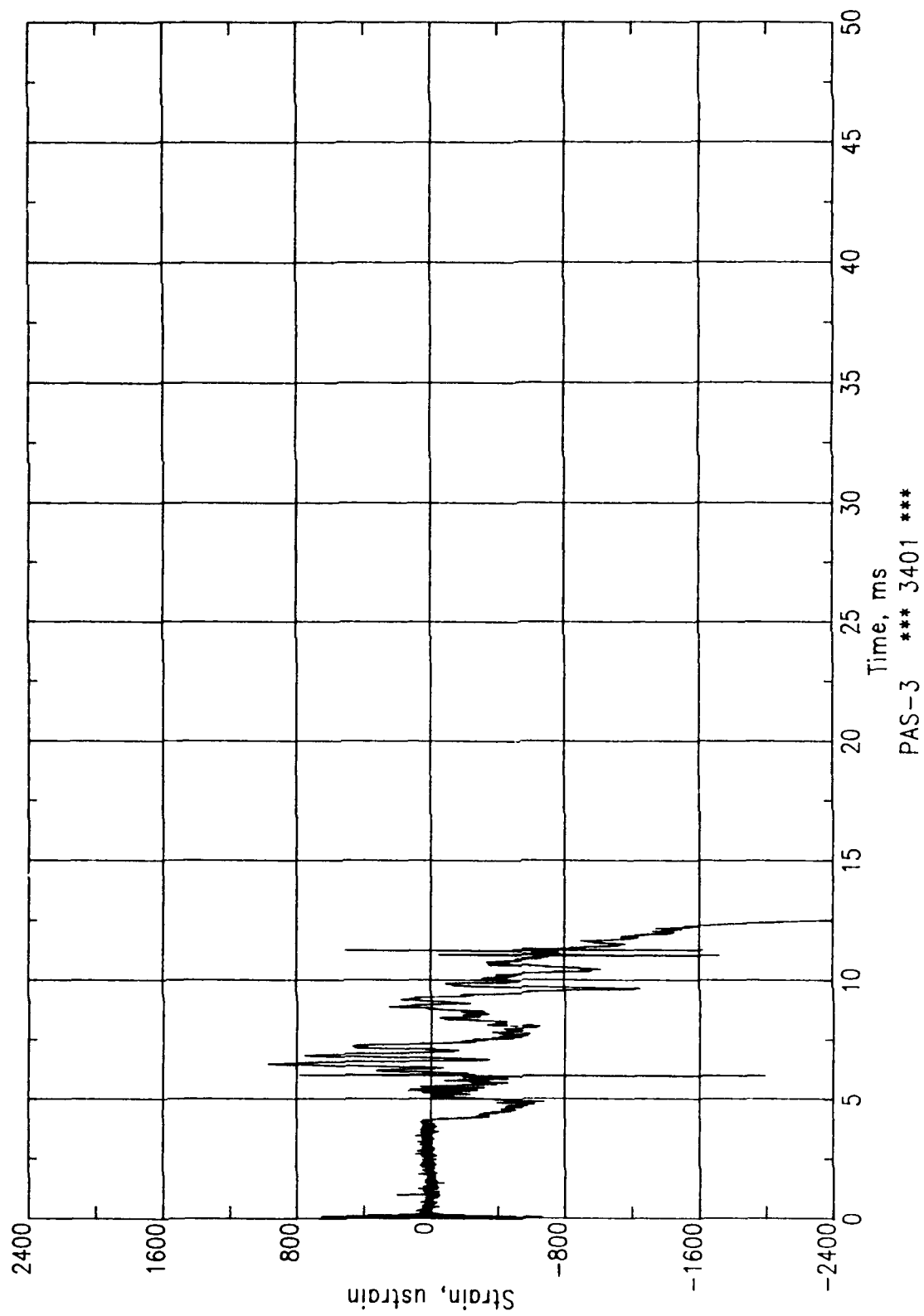


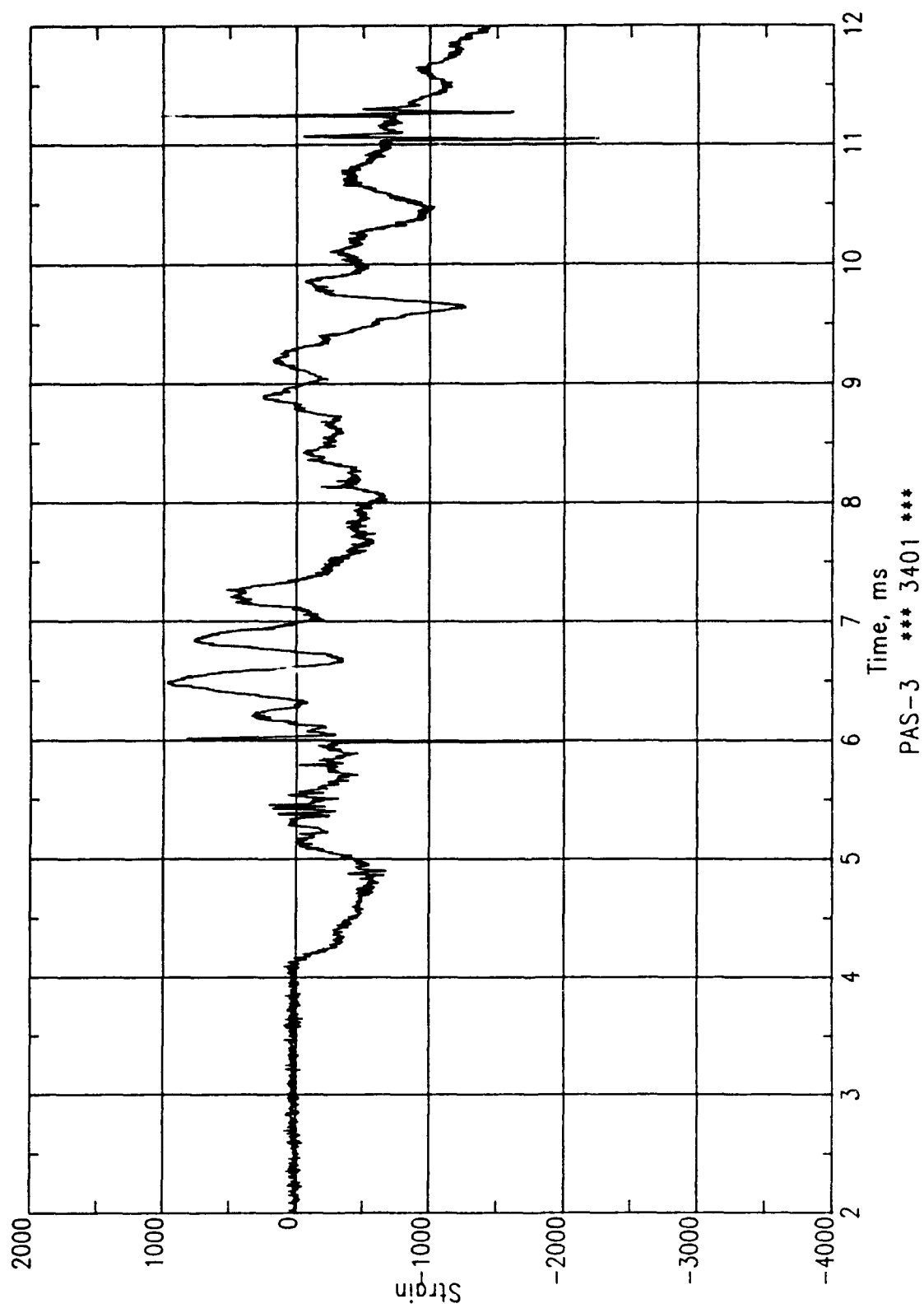


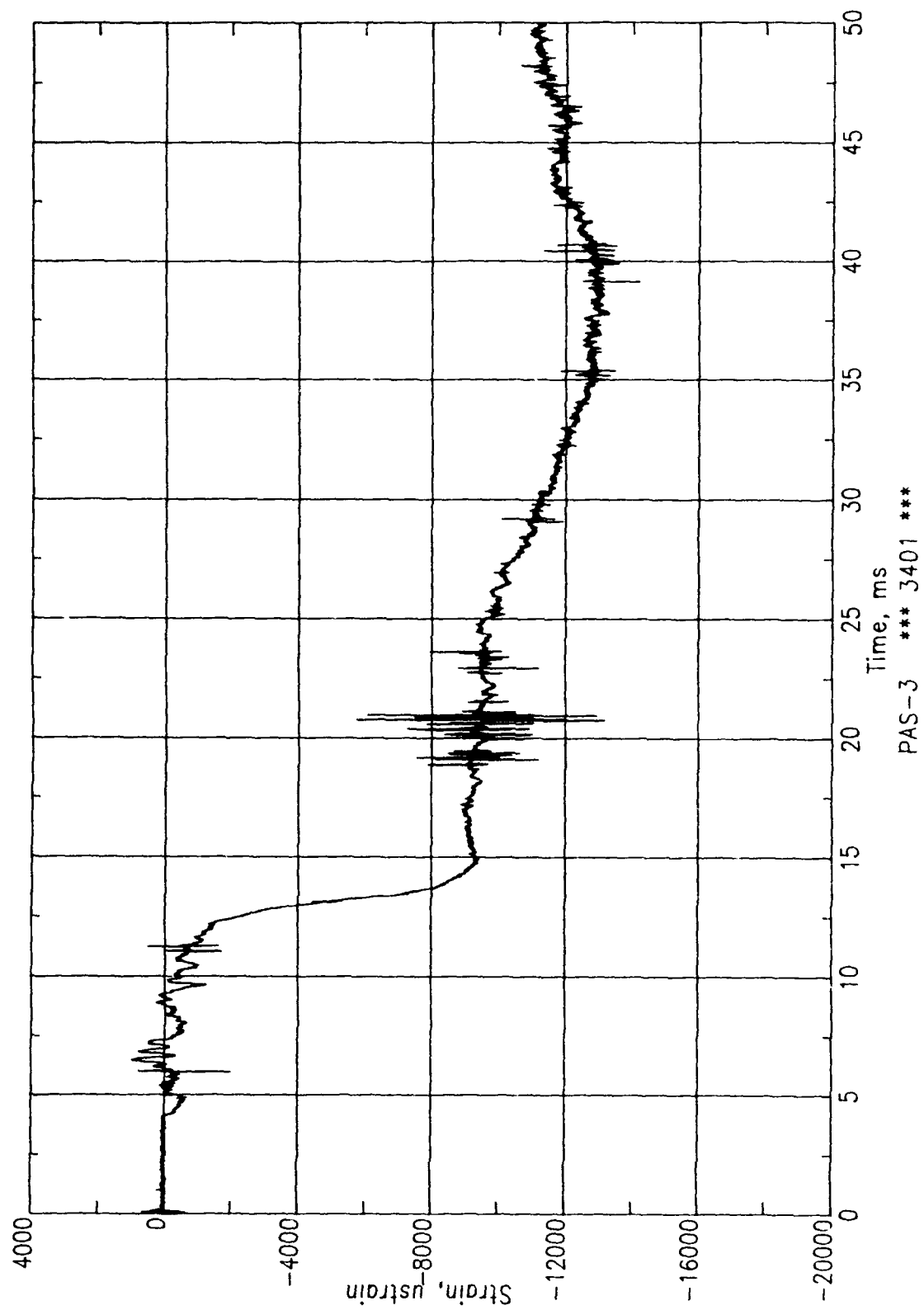


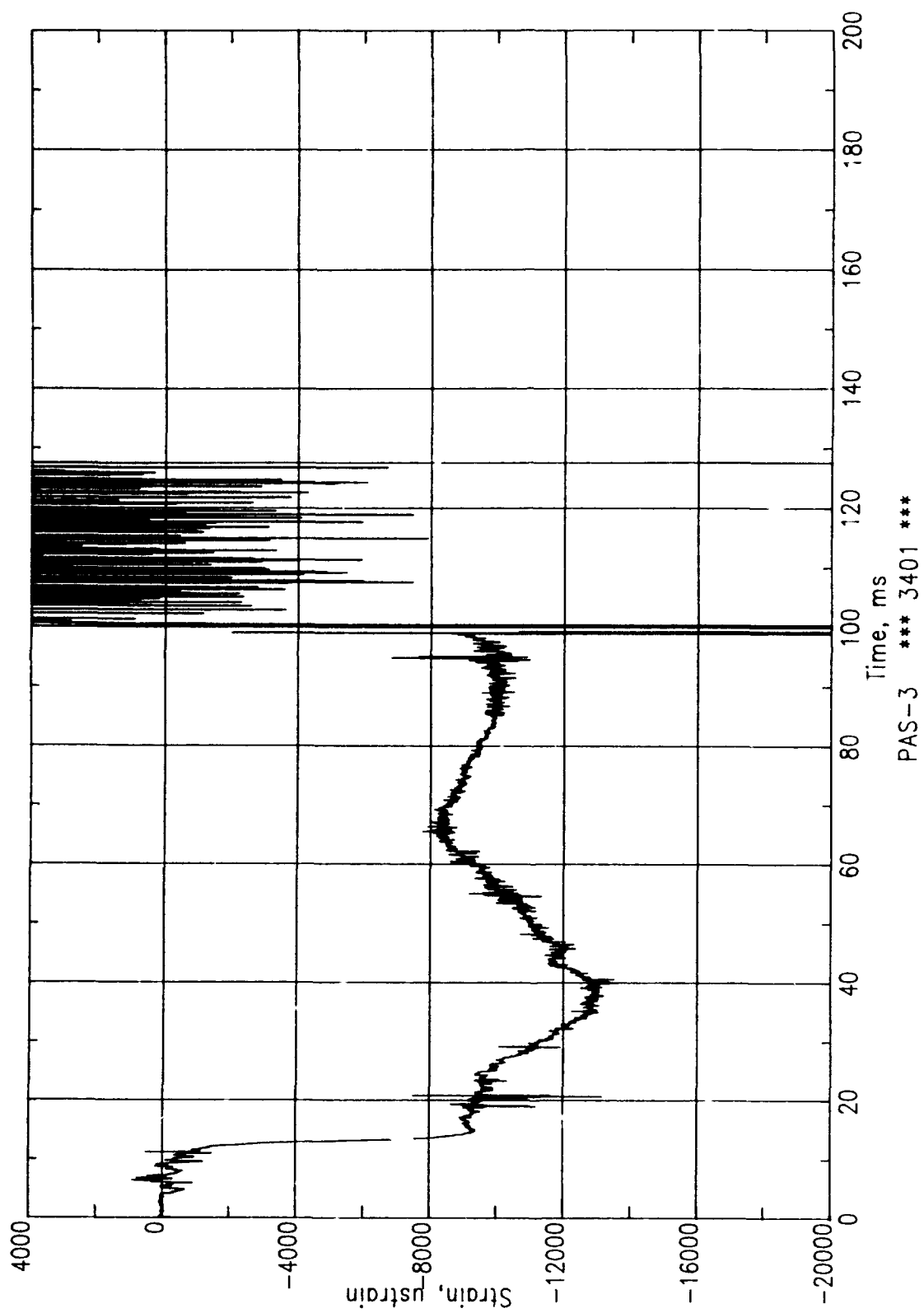


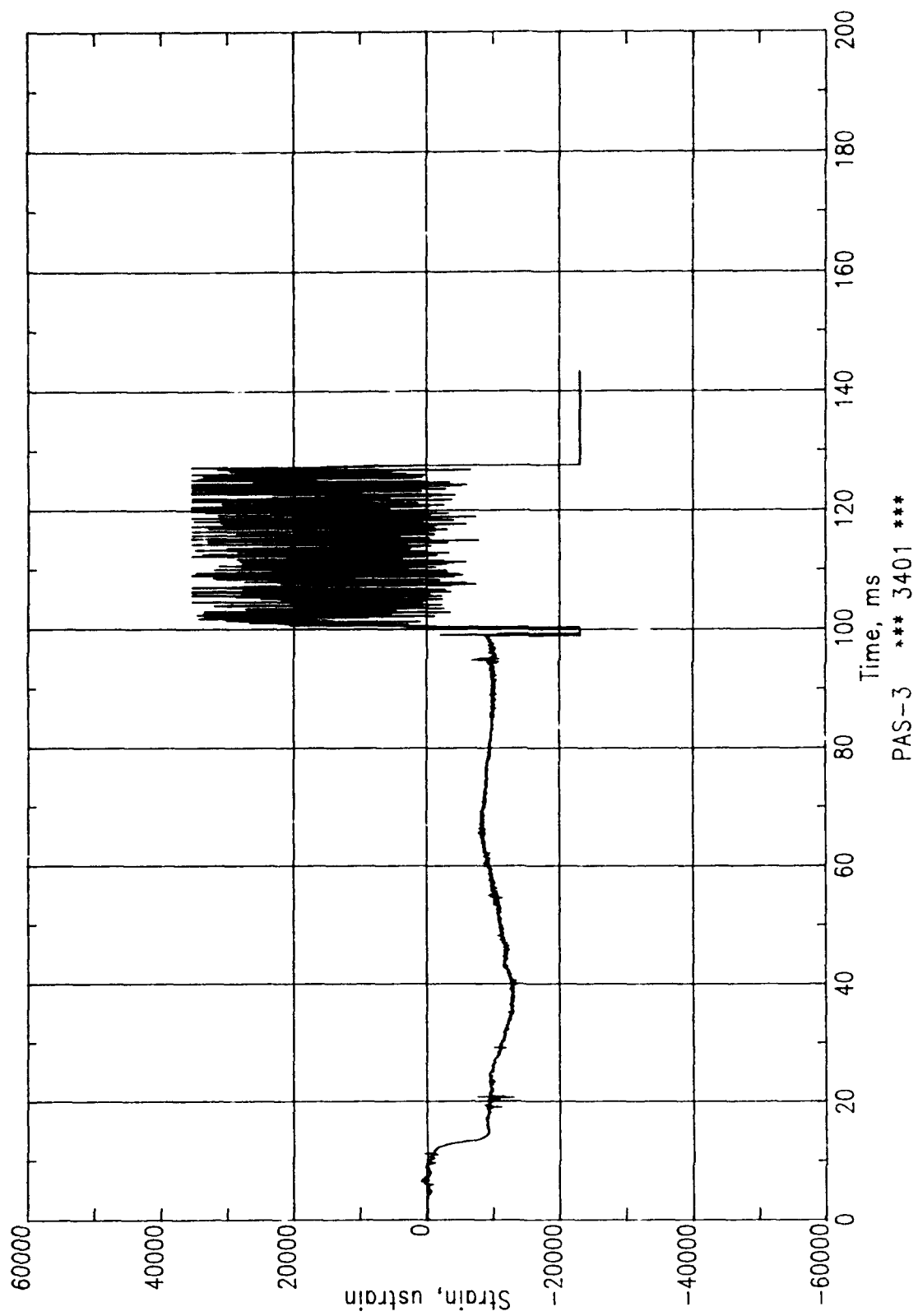


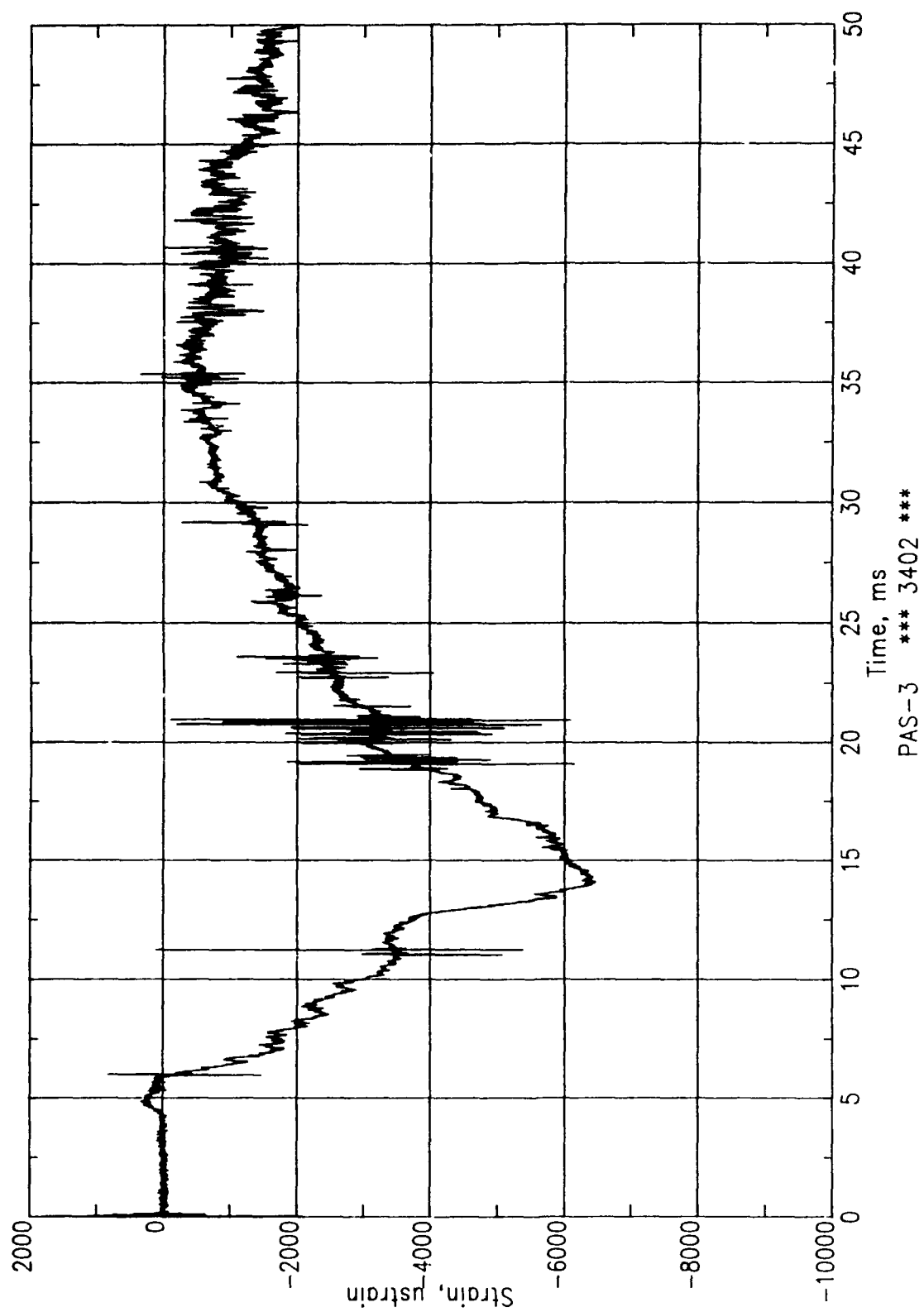


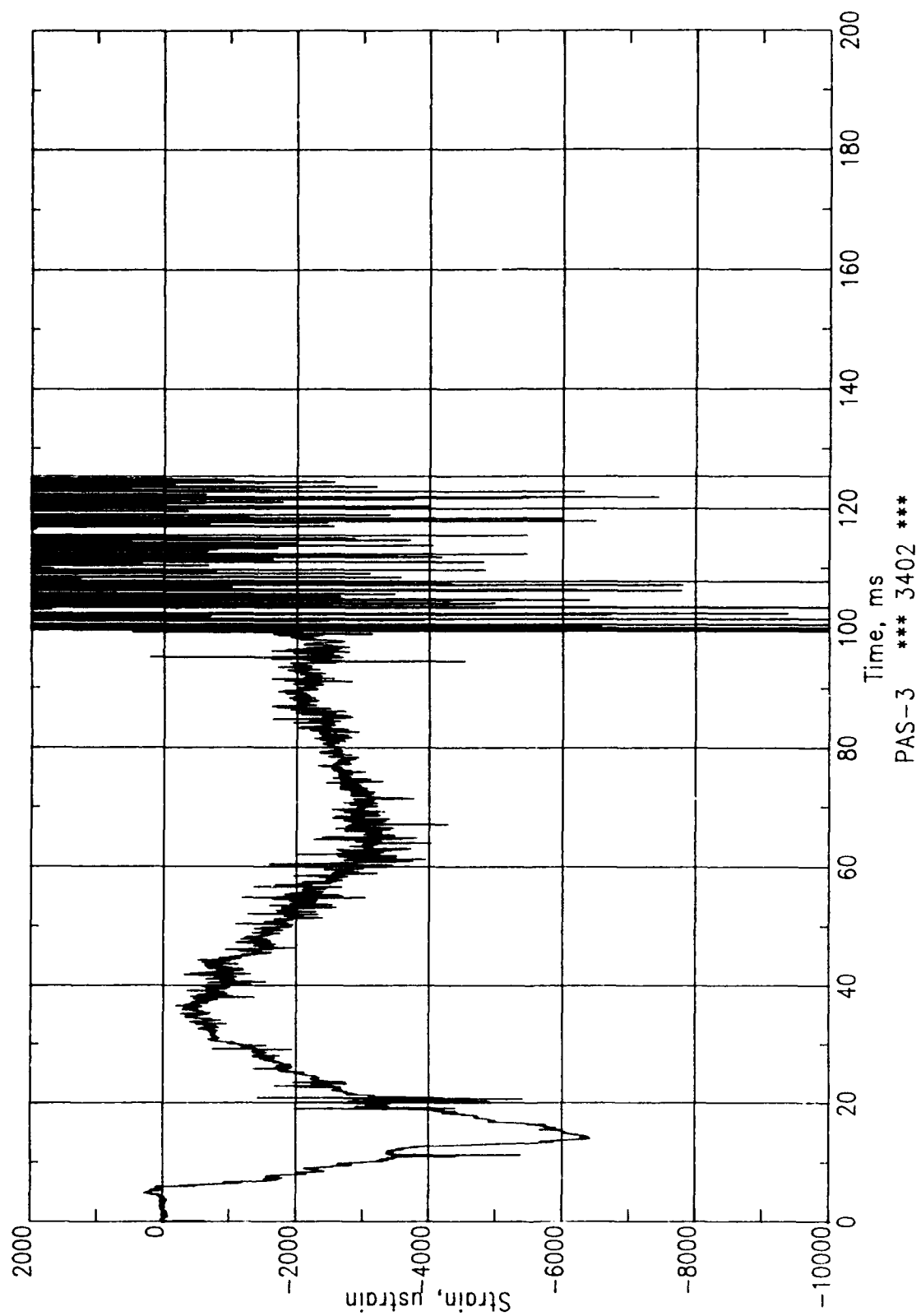


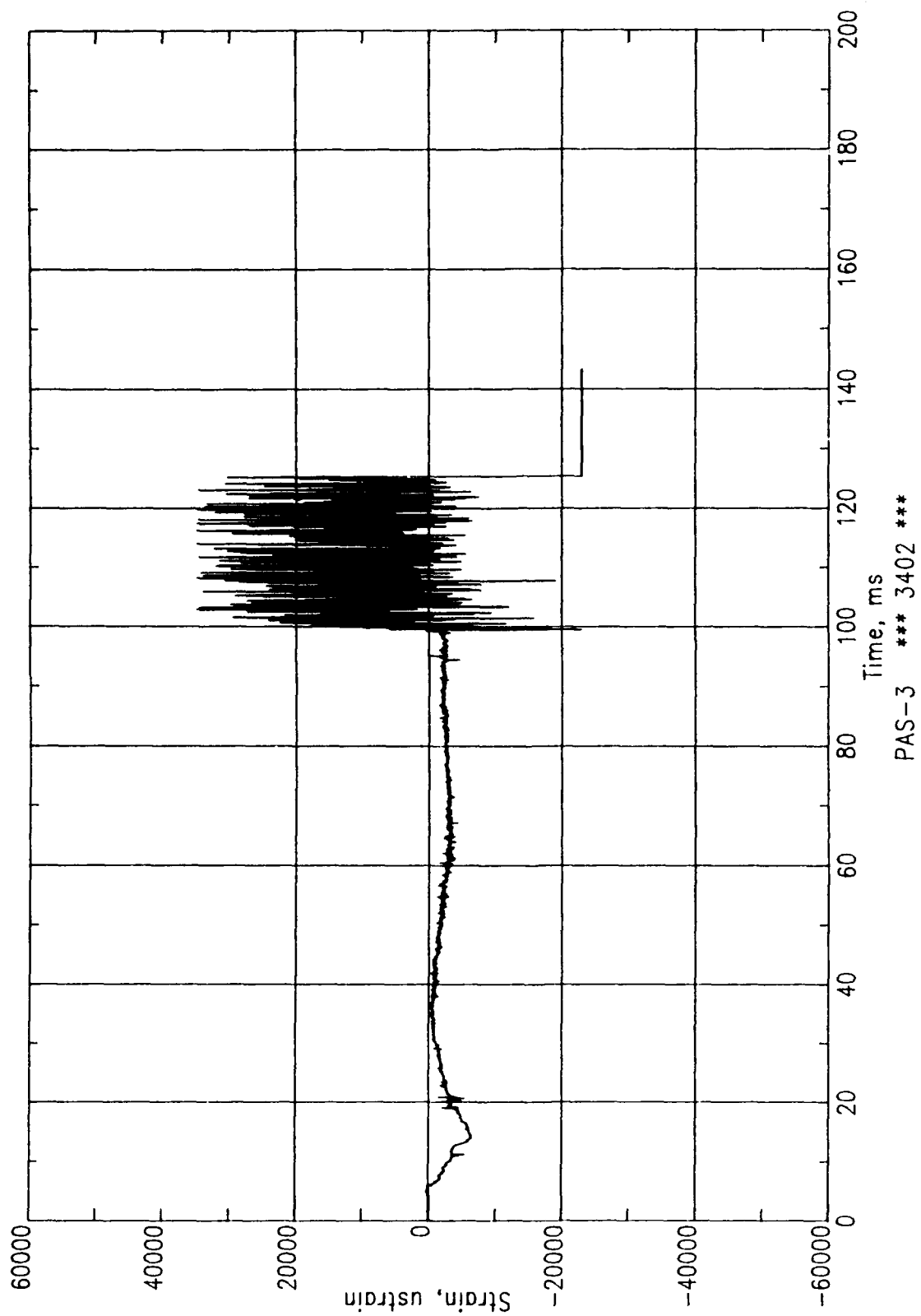


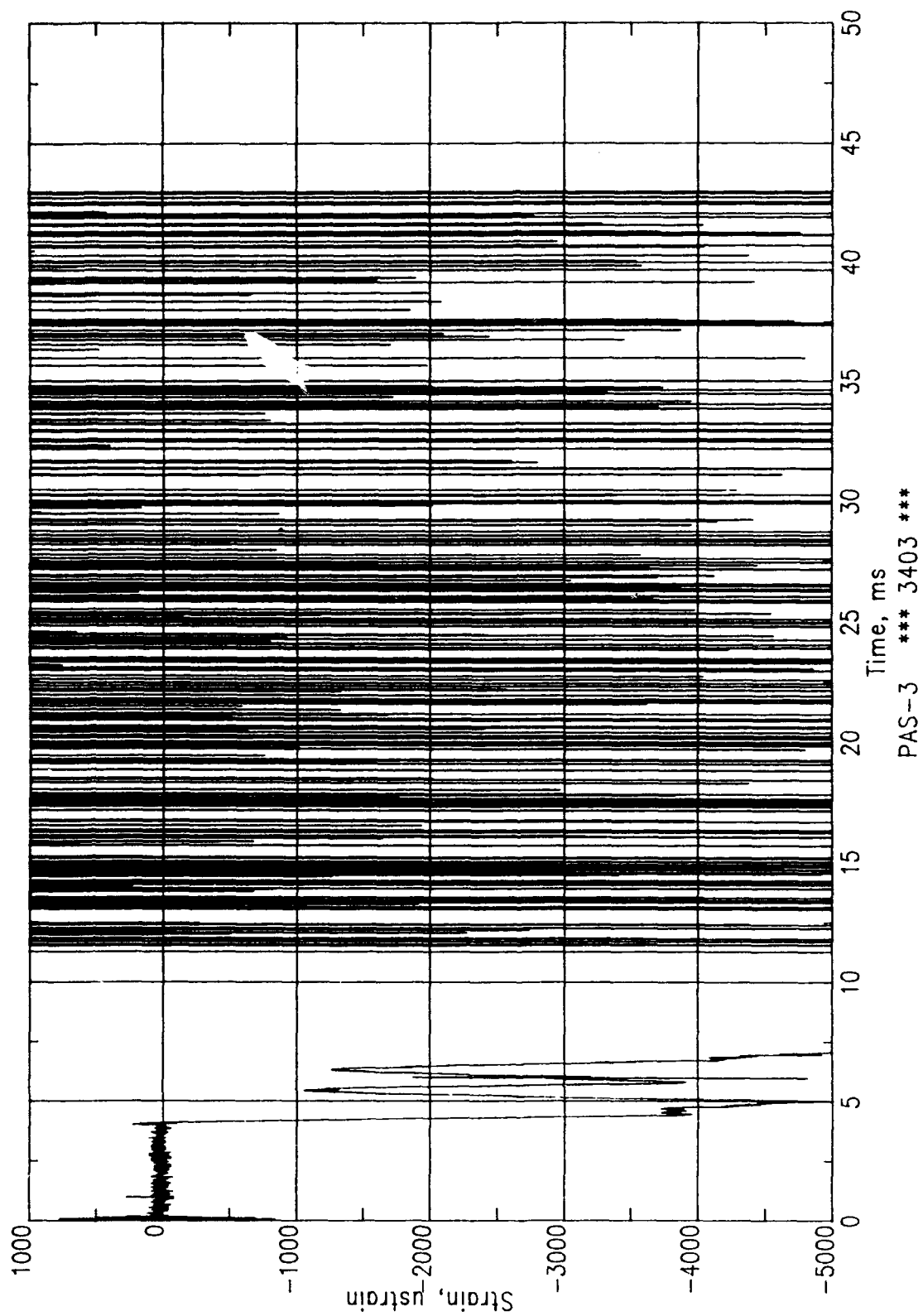


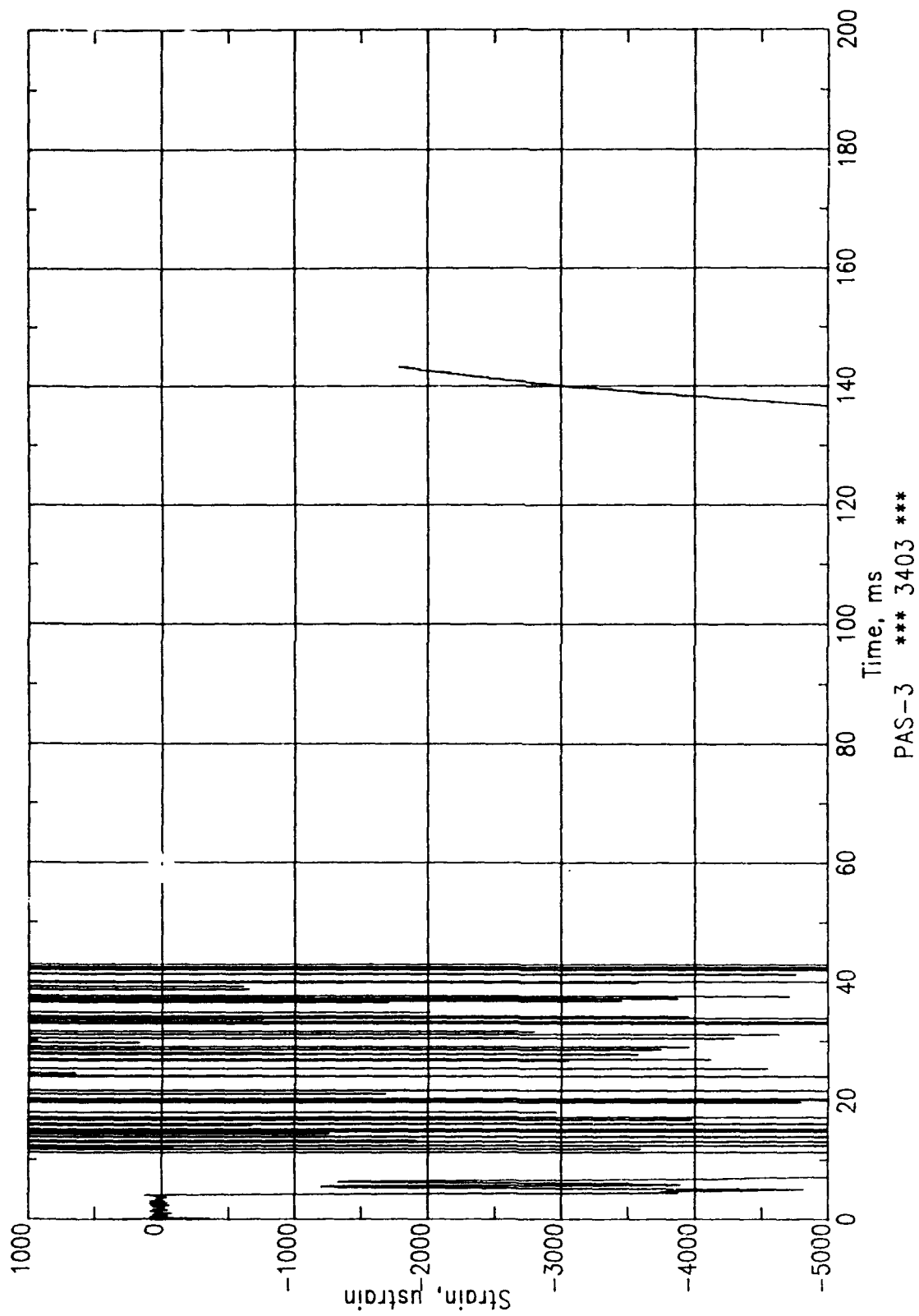


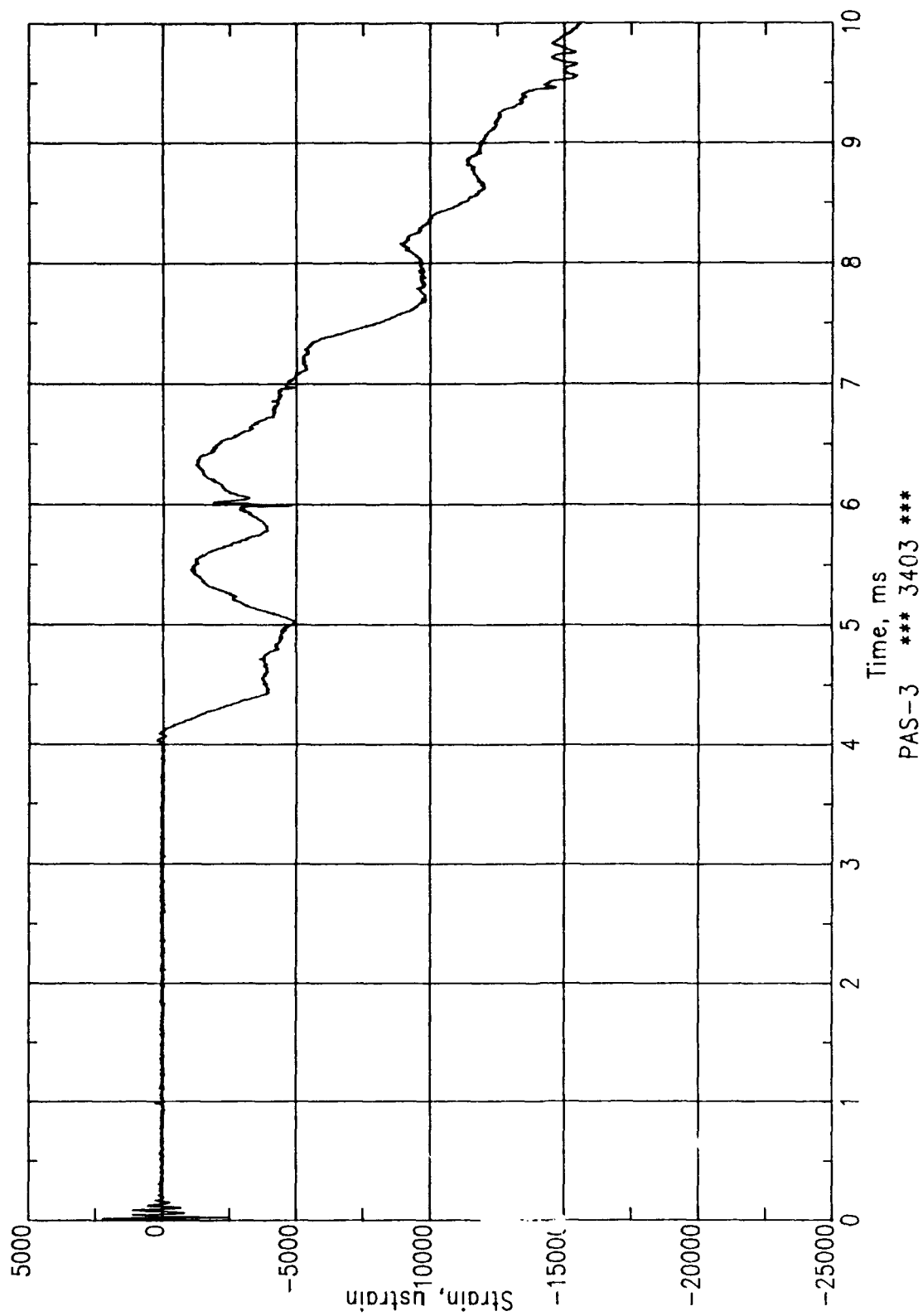


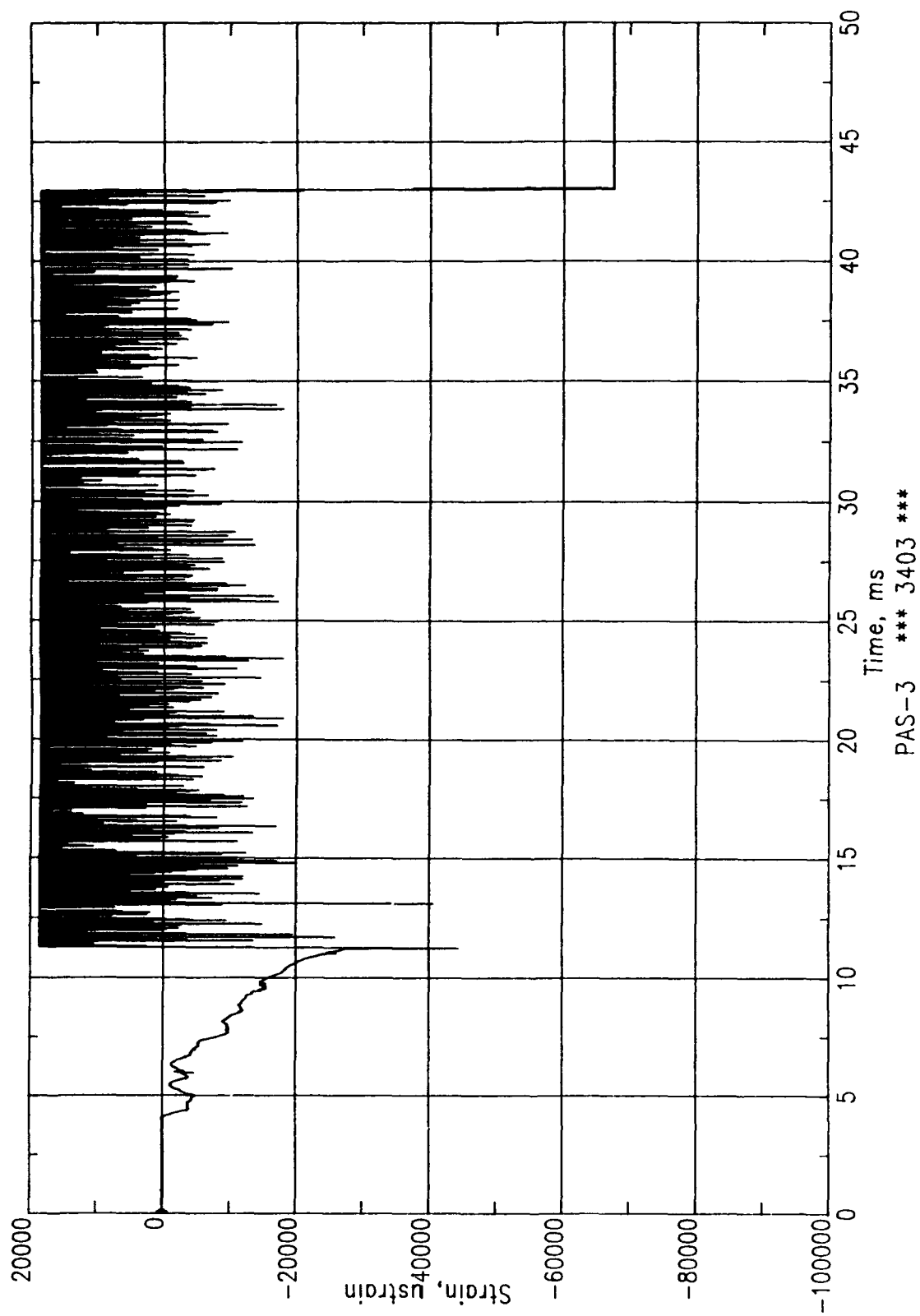


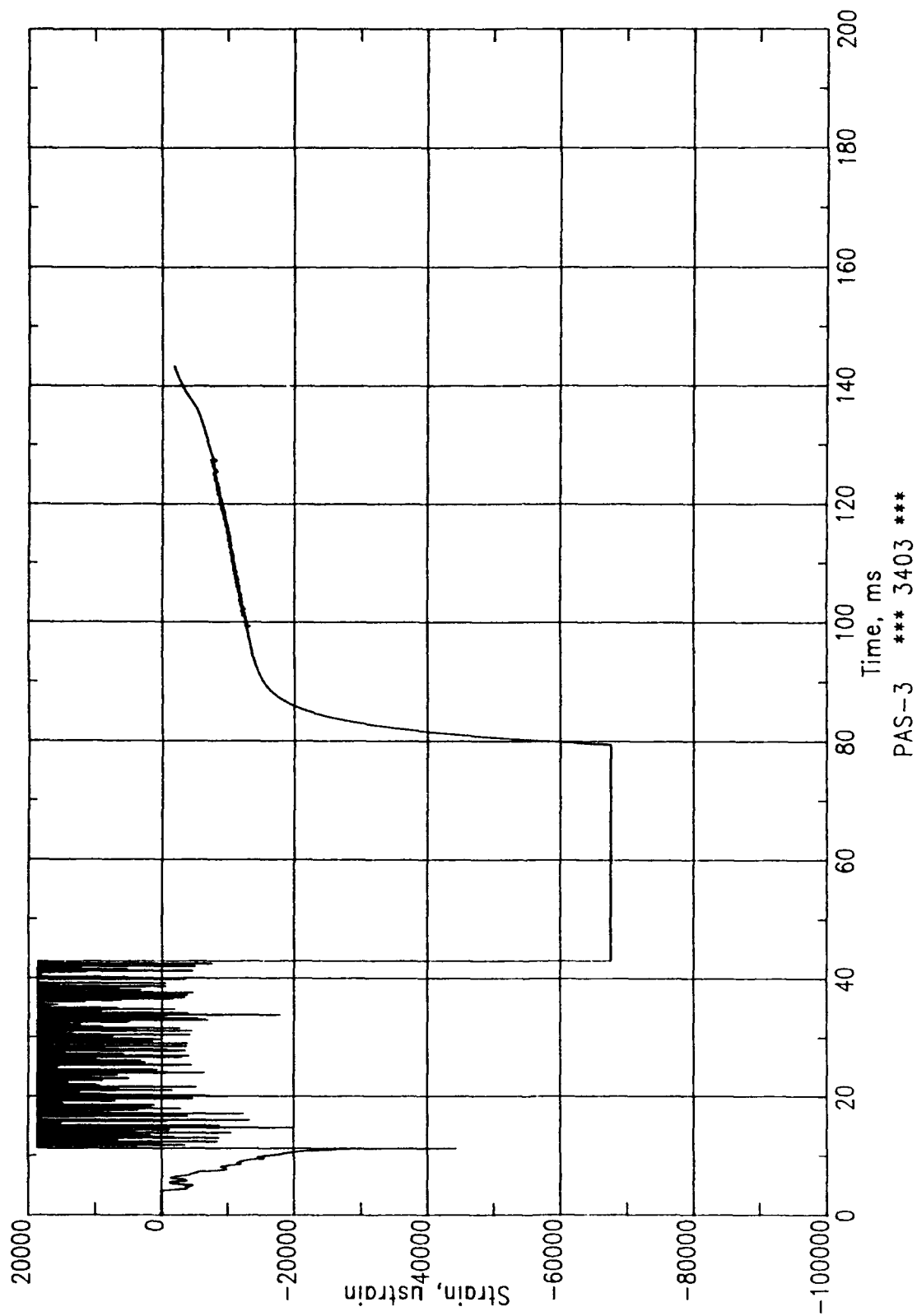


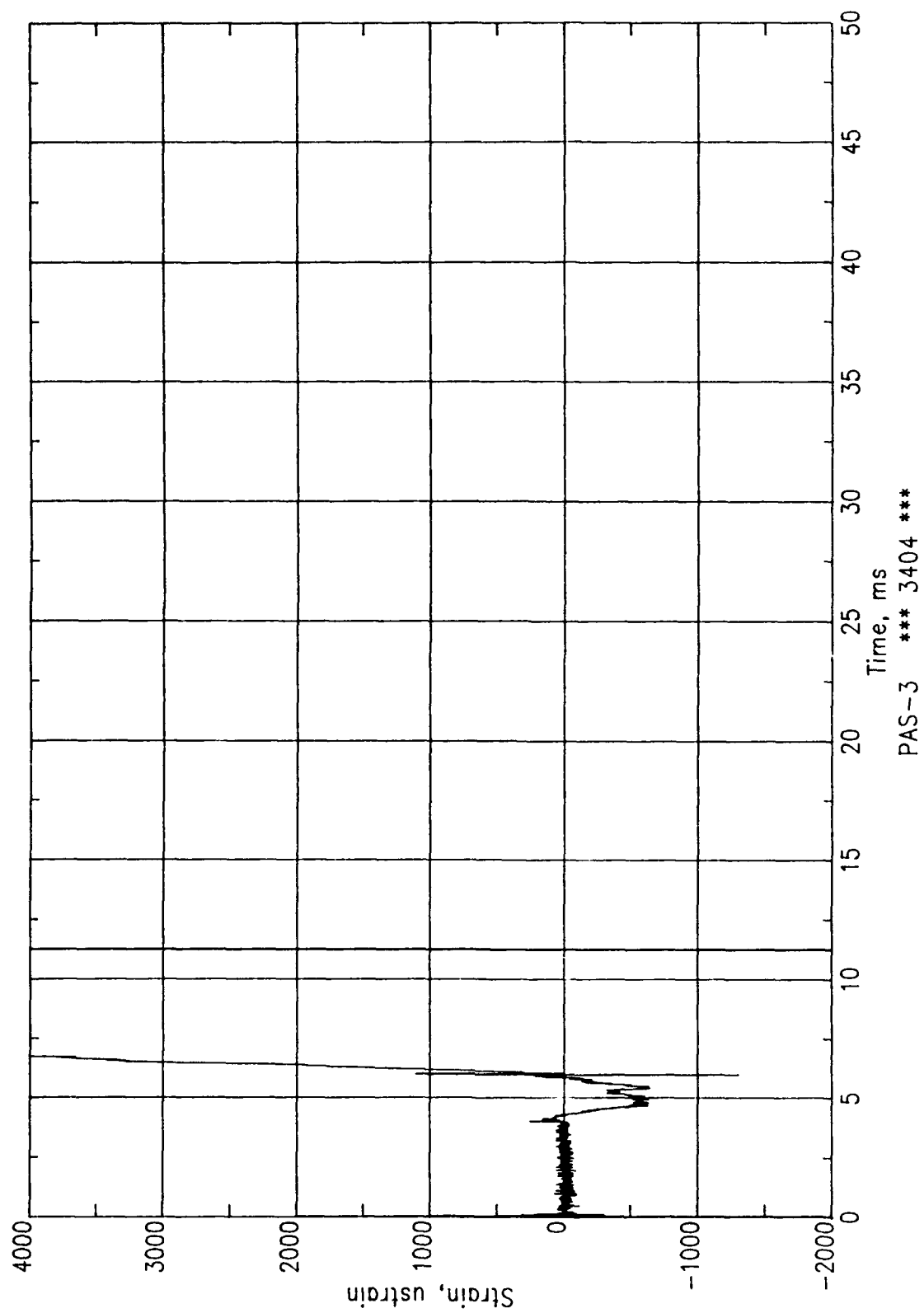


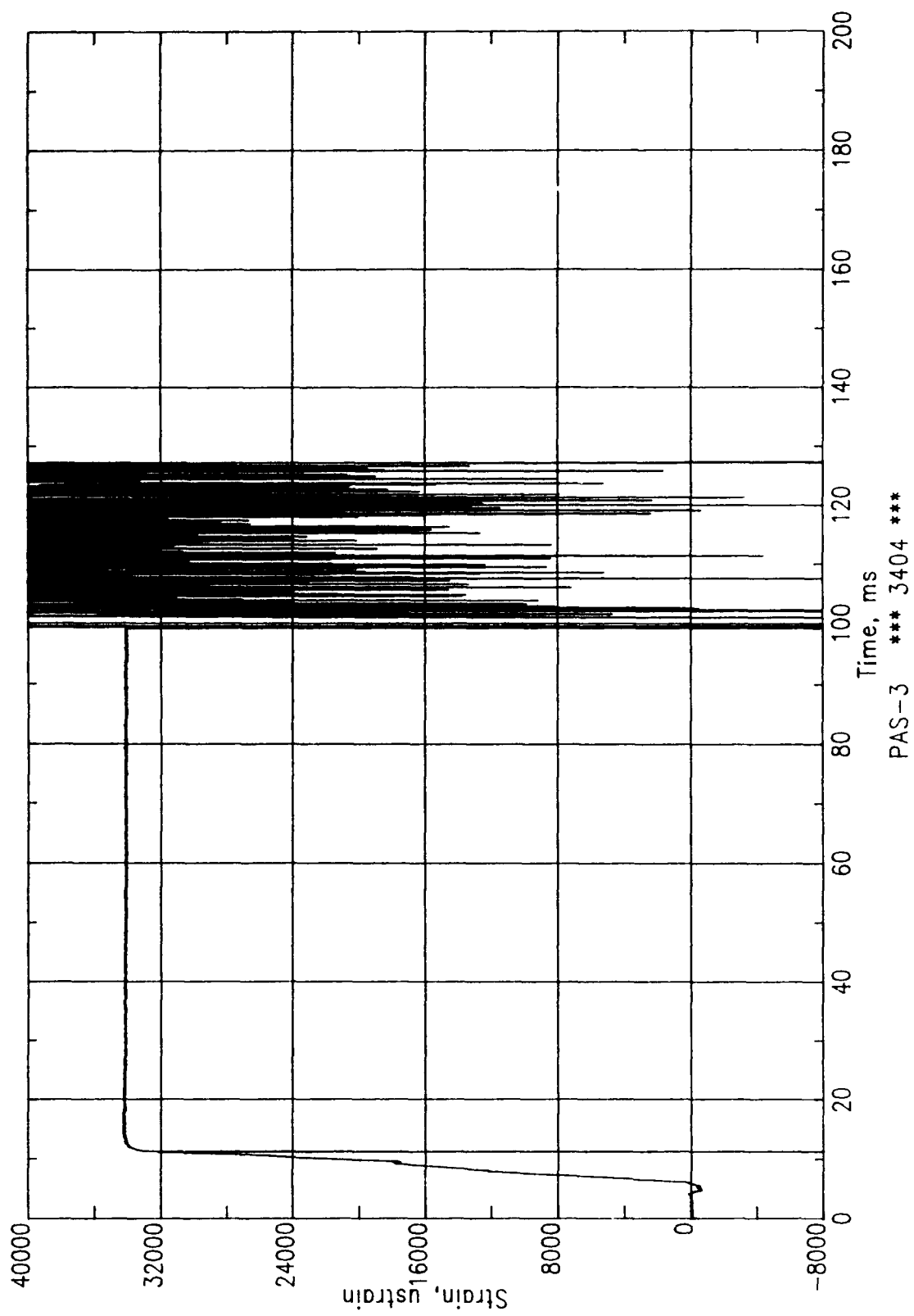


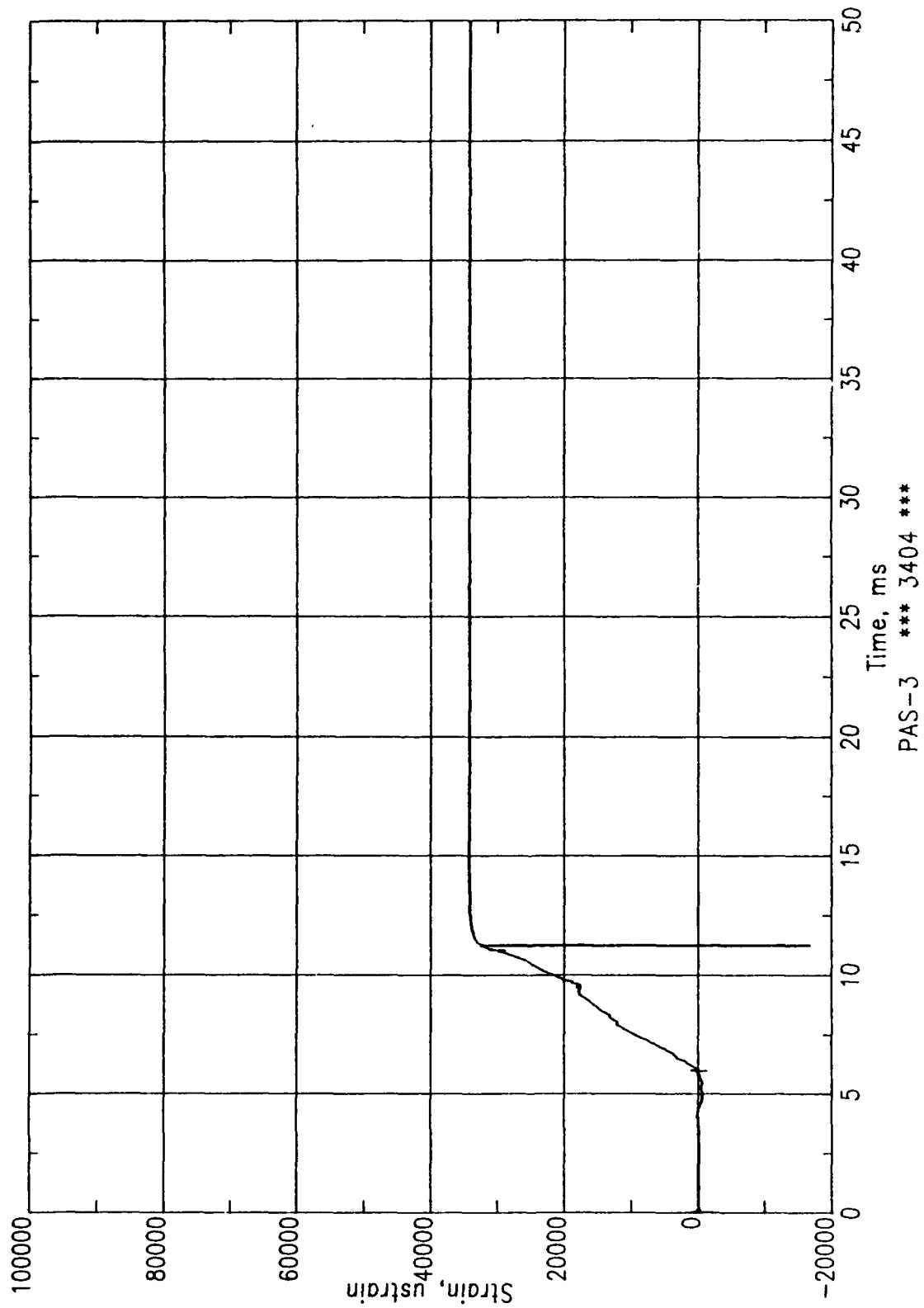


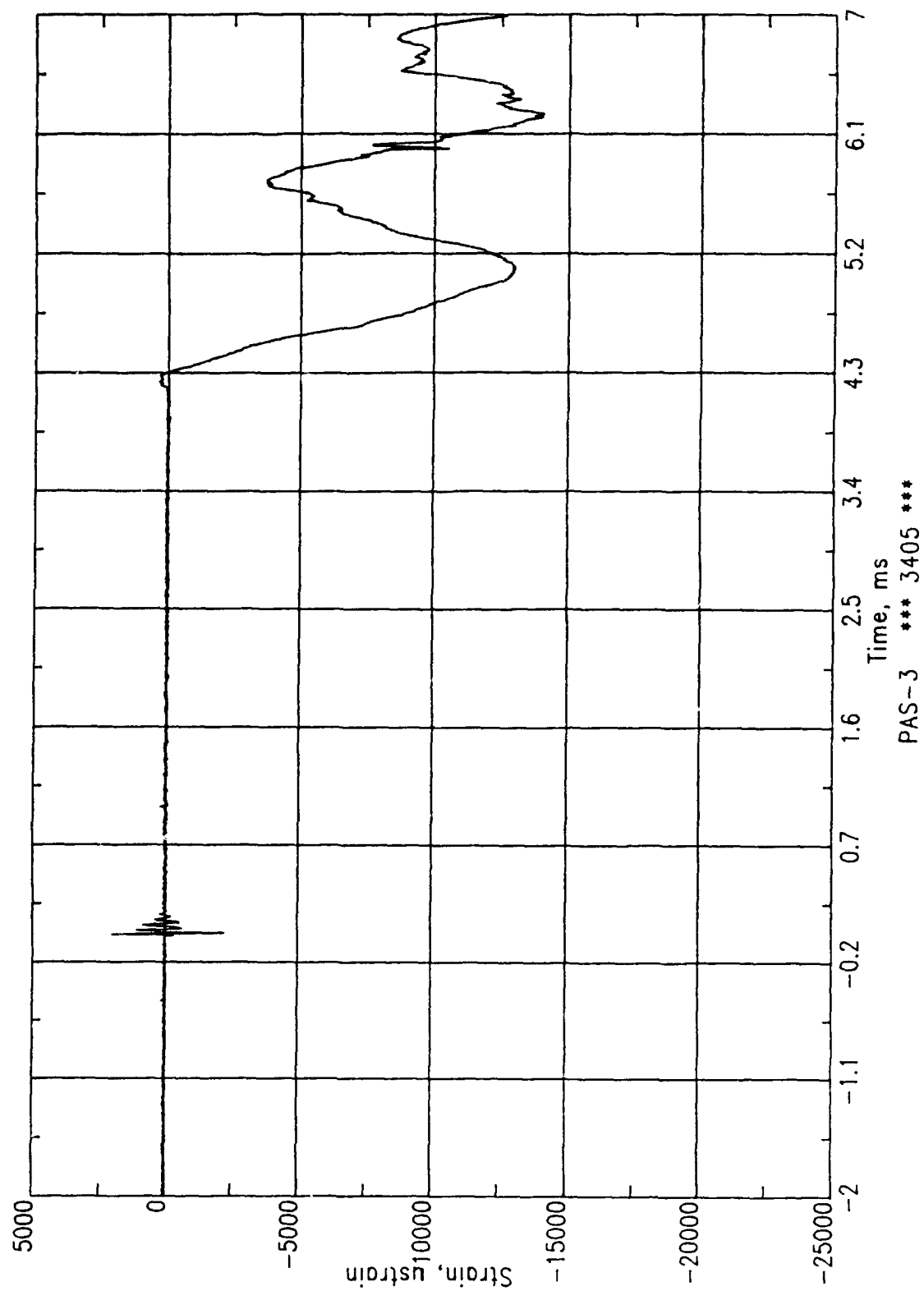


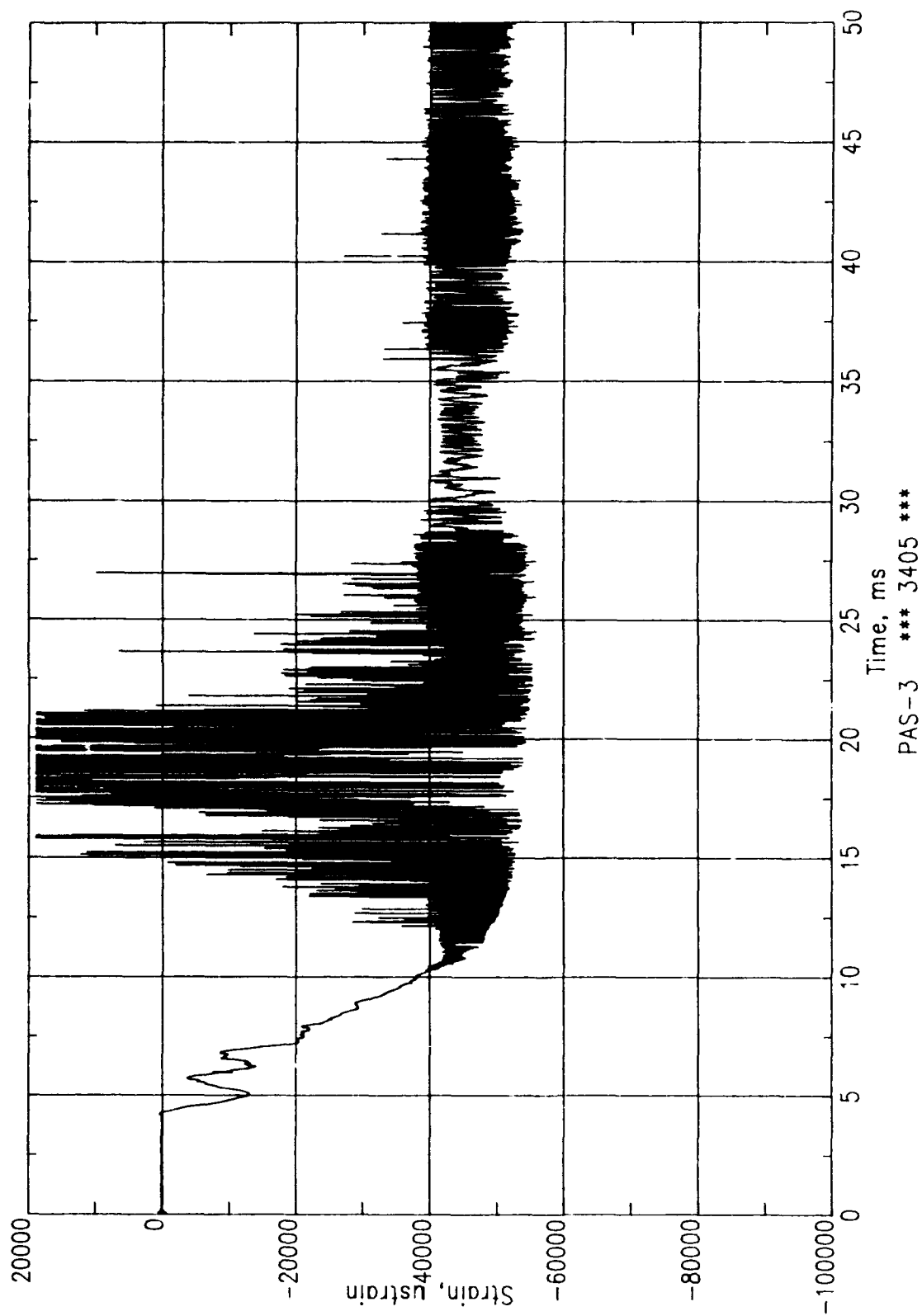


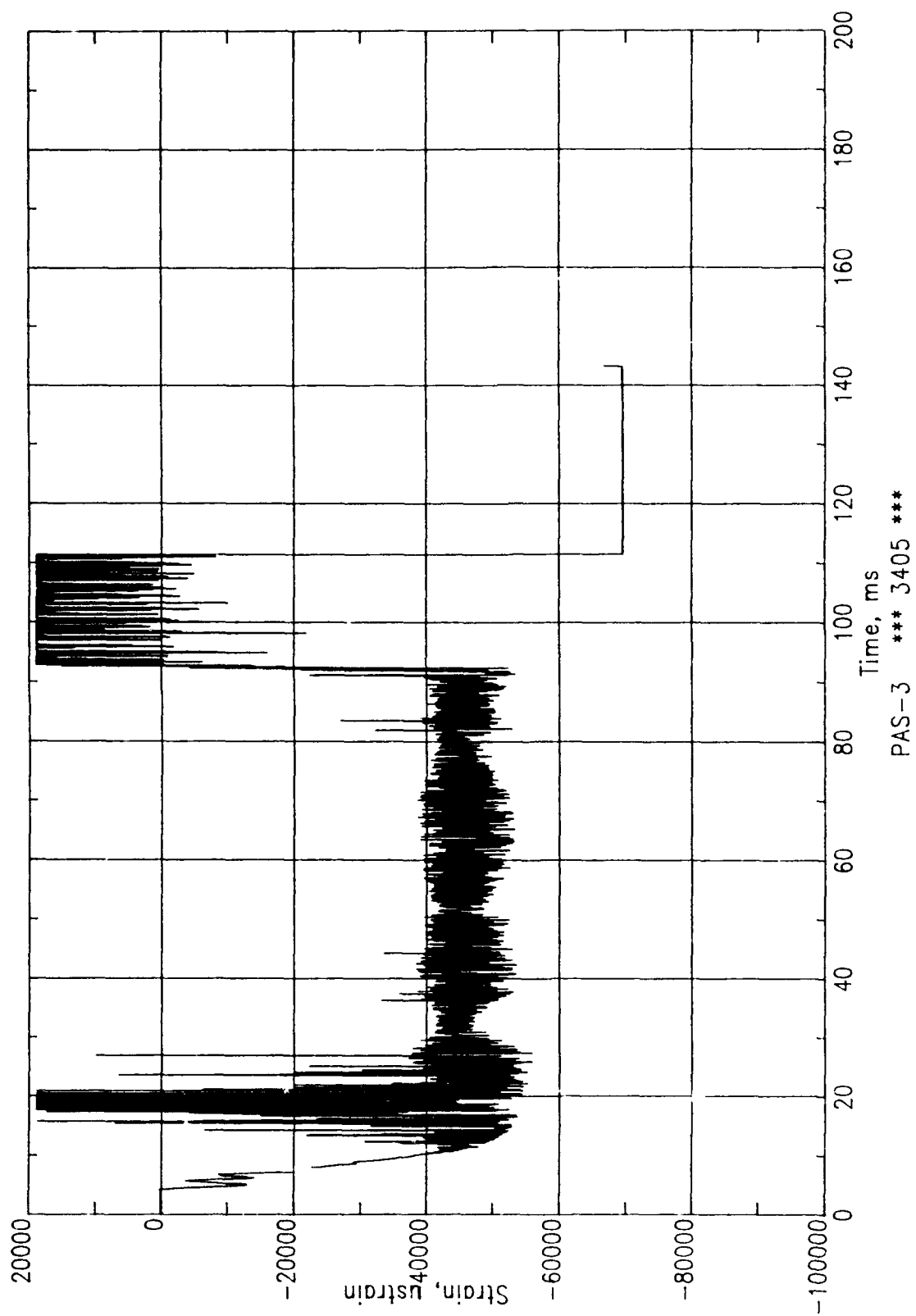


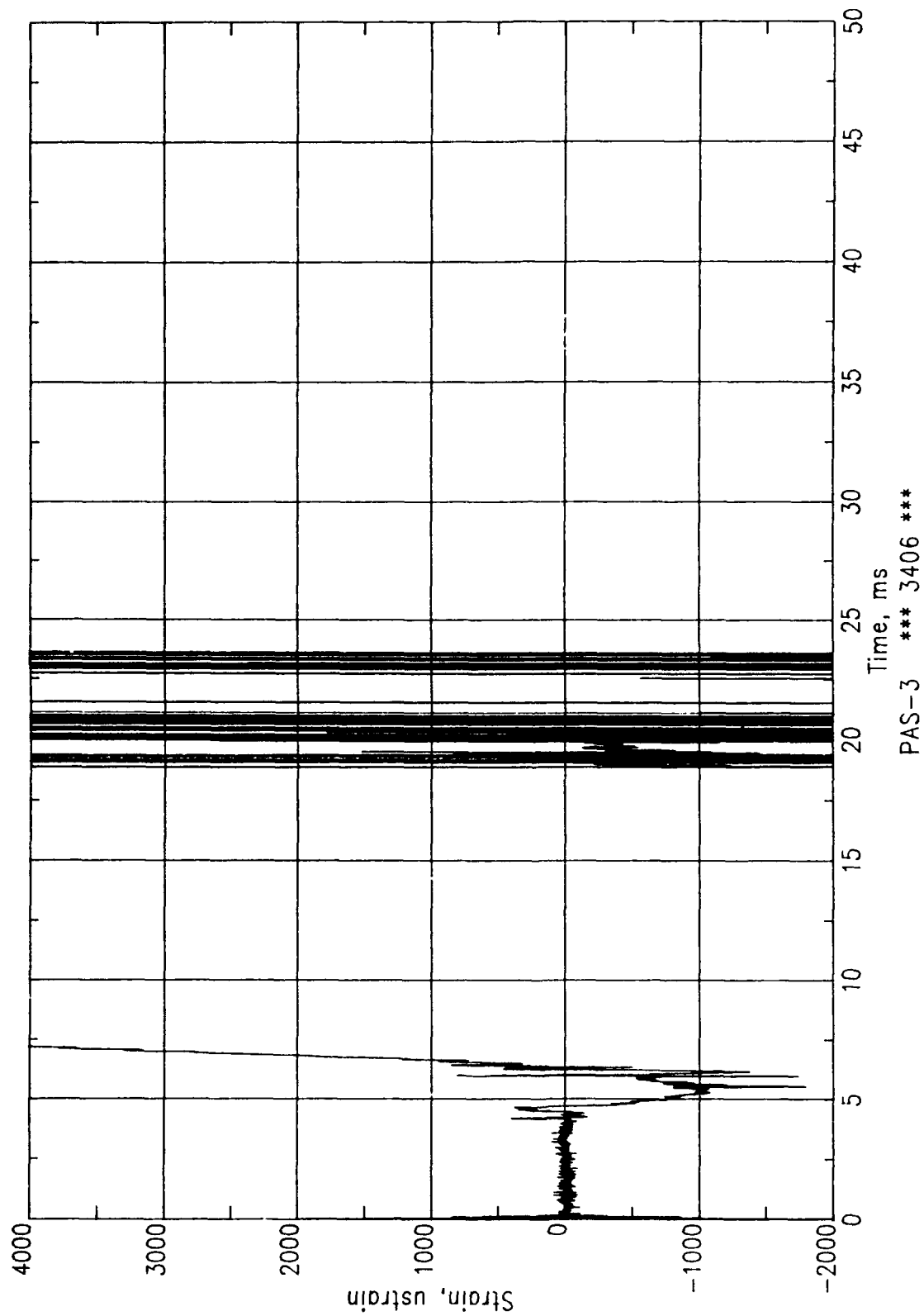




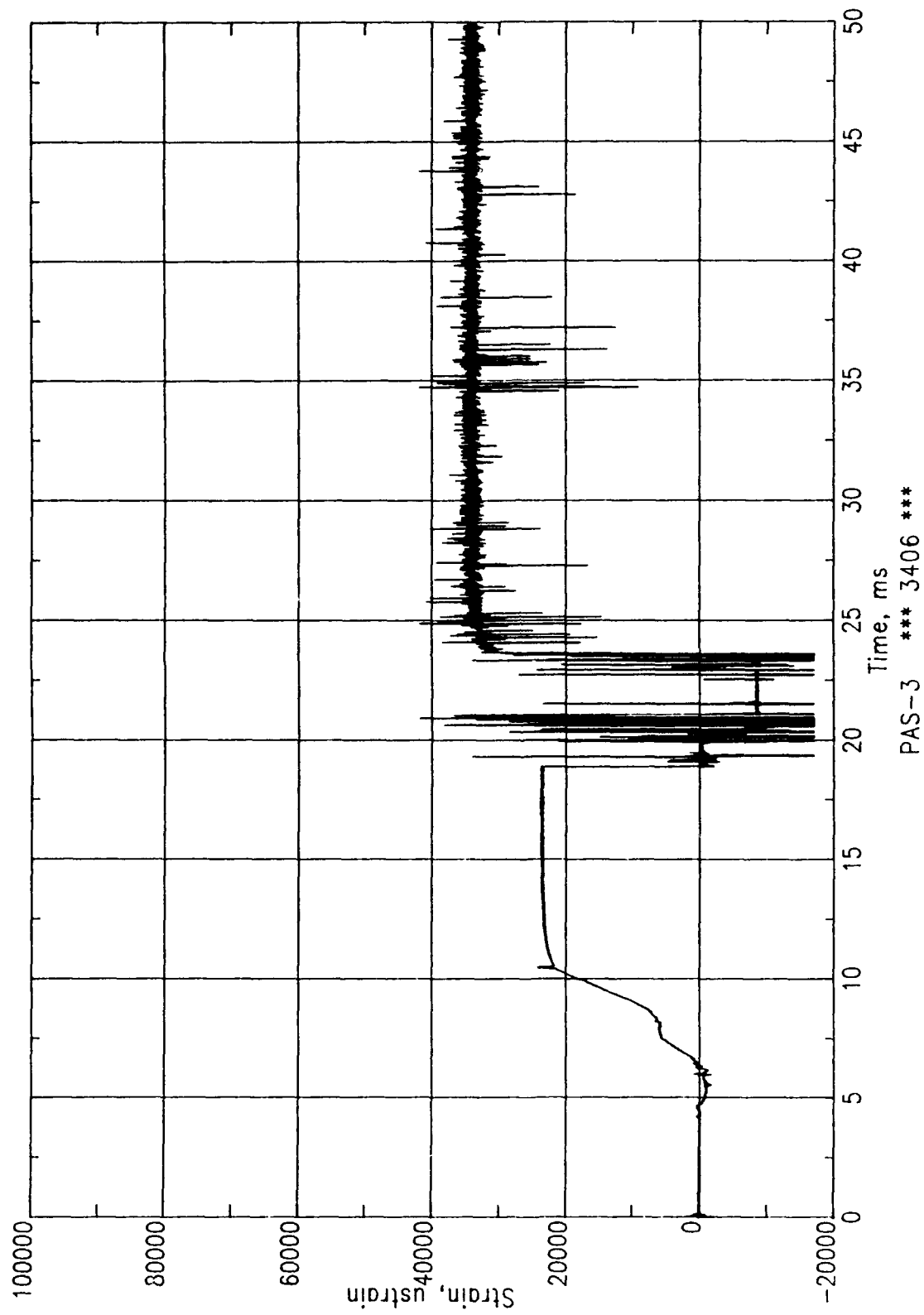


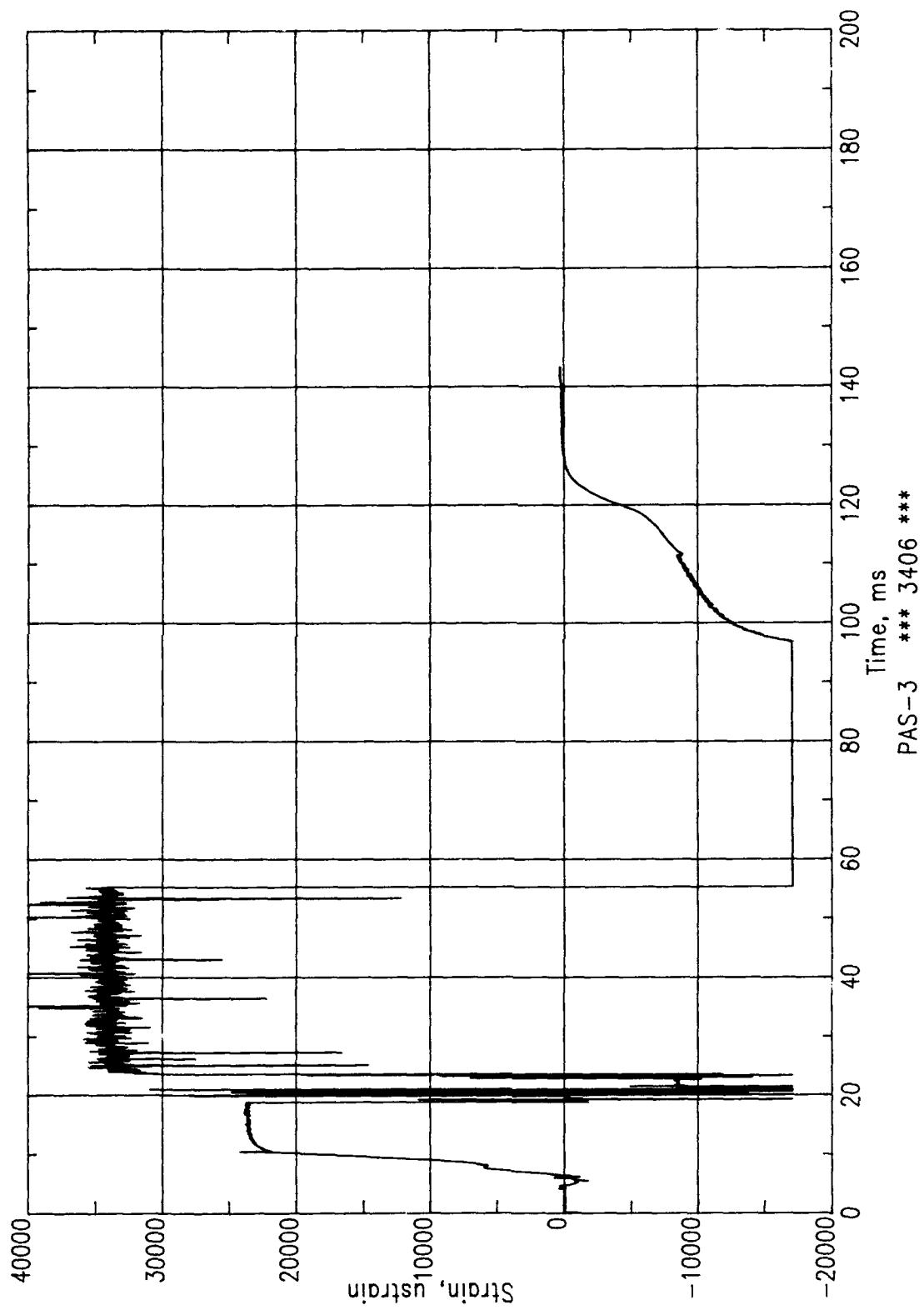






PAS-3 *** 3406 ***





2.0 PAS-3 CONCRETE DEBRIS

2.1 SIEVE DATA

The zone identification numbers and dimensions of the PAS-3 collection zones of the four 5-deg sectors are listed on the next page. The remaining pages present the weight and number of pieces of debris retained on each of the sieves.

ZONE IDENTIFICATION				INSIDE RADIUS (m)	OUTSIDE RADIUS (m)	AVERAGE RADIUS (m)	ZONE AREA (m ^ 2)
0 deg. Az. (Front)	90 deg. Az. (So. Side)	180 deg. Az. (Back)	270 deg. Az. (No. Side)				
FT 1	SS 1		NS 1	10.0	15.0	12.5	5.45
FT 2	SS 2	BK 2	NS 2	15.0	20.0	17.5	7.64
FT 3	SS 3	BK 3	NS 3	20.0	25.0	22.5	9.82
FT 4	SS 4	BK 4	NS 4	25.0	30.0	27.5	12.00
FT 5	SS 5	BK 5	NS 5	30.0	35.0	32.5	14.18
FT 6	SS 6	BK 6	NS 6	35.0	40.0	37.5	16.36
FT 7	SS 7	BK 7	NS 7	40.0	45.0	42.5	18.54
FT 8		BK 8	NS 8	45.0	50.0	47.5	20.73
FT 9		BK 9		50.0	55.0	52.5	22.91
FT 10		BK 10		55.0	60.0	57.5	25.09
FT 11	No	BK 11		60.0	65.0	62.5	27.27
FT 12	Debris	BK 12	No	65.0	70.0	67.5	29.45
FT 13	Found	BK 13	Debris	70.0	75.0	72.5	31.63
FT 14		BK 14	Found	75.0	80.0	77.5	33.82
FT 15		BK 15		80.0	85.0	82.5	36.00
FT 16		BK 16		85.0	90.0	87.5	38.18
FT 17		BK 17		90.0	95.0	92.5	40.36
FT 18				95.0	100.0	97.5	42.54

ZONE I.D.	WEIGHT RETAINED ON SIEVE (gm)												
	SIEVE SIZE (mm)												
	64-51	51-38	38-32	32-25	25-22	22-19	19-16	16-13	13-10	TOTALS			
FT1	0.0	211.5	223.0	287.4	124.7	95.8	139.3	174.2	188.0	1443.9			
FT2	0.0	0.0	184.8	203.5	77.6	60.7	59.1	82.8	105.9	774.4			
FT3	0.0	93.8	46.1	59.5	35.7	74.1	28.2	67.0	89.7	494.1			
FT4	0.0	0.0	110.7	19.9	33.7	50.3	32.1	42.5	36.4	325.6			
FT5	0.0	0.0	0.0	42.7	0.0	0.0	38.3	26.9	10.9	118.8			
FT6	0.0	0.0	0.0	0.0	14.7	14.9	4.6	9.0	2.8	46.0			
FT7	0.0	0.0	53.9	121.7	18.4	23.7	40.8	32.3	24.7	315.5			
FT8	0.0	0.0	0.0	42.1	49.9	13.5	14.7	23.4	17.1	160.7			
FT9	0.0	0.0	63.7	120.7	0.0	39.2	13.0	20.5	7.1	264.2			
FT10	0.0	0.0	0.0	77.8	0.0	0.0	0.0	24.5	8.1	110.4			
FT11	0.0	0.0	0.0	26.0	0.0	11.6	10.1	6.7	15.7	70.1			
FT12	0.0	0.0	41.8	22.5	0.0	12.4	15.0	28.9	0.0	120.6			
FT13	0.0	0.0	0.0	29.0	0.0	10.2	14.2	13.6	9.4	76.4			
FT14	0.0	0.0	0.0	0.0	0.0	11.7	6.4	0.0	1.4	19.5			
FT15	0.0	0.0	0.0	0.0	0.0	18.3	0.0	0.0	5.1	23.4			
FT16	0.0	0.0	0.0	28.0	0.0	0.0	0.0	11.4	5.0	44.4			
FT17	0.0	79.8	60.1	0.0	16.7	0.0	12.1	22.7	6.6	198.0			
FT18	0.0	0.0	0.0	35.5	0.0	0.0	0.0	3.3	1.4	40.2			
Totals	0.0	385.1	784.1	1116.3	371.4	436.4	427.9	589.7	535.3	4646.2			

ZONE	NUMBER RETAINED ON SIEVE											TOTALS
	SIEVE SIZE (mm)											
	64-51	51-38	38-32	32-25	25-22	22-19	19-16	16-13	13-10			
I.D.												
FT1	0	2	4	9	6	9	19	42	79	170		
FT2	0	0	3	6	4	5	8	19	45	90		
FT3	0	1	1	2	2	6	4	16	38	70		
FT4	0	0	2	1	2	4	4	10	16	39		
FT5	0	0	0	1	0	0	5	6	5	17		
FT6	0	0	0	0	1	2	1	2	1	7		
FT7	0	0	1	4	1	2	6	7	10	31		
FT8	0	0	0	1	3	1	2	5	7	19		
FT9	0	0	1	4	0	3	2	5	3	18		
FT10	0	0	0	2	0	0	0	6	3	11		
FT11	0	0	0	1	0	1	2	2	6	12		
FT12	0	0	1	1	0	1	2	7	0	12		
FT13	0	0	0	1	0	1	2	3	4	11		
FT14	0	0	0	0	0	1	1	0	1	3		
FT15	0	0	0	0	0	2	0	0	2	4		
FT16	0	0	0	1	0	0	0	3	2	6		
FT17	0	1	1	0	1	0	2	5	3	13		
FT18	0	0	0	1	0	0	0	1	1	3		
Totals	0	4	14	35	20	38	60	139	226	536		
Ave. Wt.	0.0	96.3	56.0	31.9	18.6	11.5	7.1	4.2	2.4	8.7		
S.F.	0.00	0.46	0.54	0.57	0.60	0.56	0.55	0.58	0.6	0.56		

ZONE I.D.	WEIGHT RETAINED ON SIEVE (gm)											
	SIEVE SIZE (mm)											
	64-51	51-38	38-32	32-25	25-22	22-19	19-16	16-13	13-10	TOTALS		
SS1	0.0	0.0	35.8	43.8	39.5	34.0	22.9	37.5	11.5	225.0		
SS2	0.0	0.0	0.0	51.0	0.0	16.9	12.6	9.0	5.2	94.7		
SS3	0.0	0.0	0.0	0.0	0.0	17.3	0.0	8.7	1.4	27.4		
SS4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	11.3	18.2		
SS5	0.0	0.0	0.0	0.0	13.5	28.5	4.4	15.9	10.3	72.6		
SS6	0.0	0.0	0.0	0.0	22.3	0.0	7.0	0.0	7.6	36.9		
SS7	0.0	0.0	0.0	0.0	0.0	10.3	0.0	8.2	2.2	20.7		
Totals	0.0	0.0	35.8	94.8	75.3	107.0	46.9	86.2	49.5	495.5		

ZONE I.D.	NUMBER RETAINED ON SIEVE											
	SIEVE SIZE (mm)											
	64-51	51-38	38-32	32-25	25-22	22-19	19-16	16-13	13-10	TOTALS		
SS1	0	0	1	1	2	3	3	9	5	24		
SS2	0	0	0	2	0	1	2	2	2	9		
SS3	0	0	0	0	0	1	0	2	1	4		
SS4	0	0	0	0	0	0	0	2	5	7		
SS5	0	0	0	0	1	3	1	4	5	14		
SS6	0	0	0	0	1	0	1	0	3	5		
SS7	0	0	0	0	0	1	0	2	1	4		
Totals	0	0	1	3	4	9	7	21	22	67		
Ave. Wt	0.0	0.0	35.8	31.6	18.8	11.9	6.7	4.1	2.3	7.4		
S.F.	0.00	0.00	0.35	0.57	0.60	0.58	0.52	0.56	0.62	0.54		

ZONE I.D.	WEIGHT RETAINED ON SIEVE (gm)											
	SIEVE SIZE (mm)											
	64-51	51-38	38-32	32-25	25-22	22-19	19-16	16-13	13-10	TOTALS		
NS1	0.0	105.9	274.6	300.0	72.1	65.8	178.3	114.7	151.1	1262.5		
NS2	0.0	0.0	102.6	62.8	56.9	88.8	66.0	141.2	134.5	652.8		
NS3	0.0	172.0	101.9	134.6	126.7	117.2	204.1	129.1	158.8	1144.4		
NS4	0.0	205.8	107.3	47.3	0.0	72.3	39.3	81.1	140.3	693.4		
NS5	0.0	0.0	101.0	0.0	42.2	41.8	39.6	48.7	46.0	319.3		
NS6	0.0	0.0	0.0	0.0	0.0	13.4	51.6	58.2	84.6	207.8		
NS7	0.0	0.0	0.0	0.0	0.0	13.6	0.0	4.9	0.0	18.5		
NS8	0.0	0.0	43.1	0.0	0.0	0.0	0.0	2.8	1.7	47.6		
Totals	0.0	483.7	730.5	544.7	297.9	412.9	578.9	580.7	717.0	4346.3		

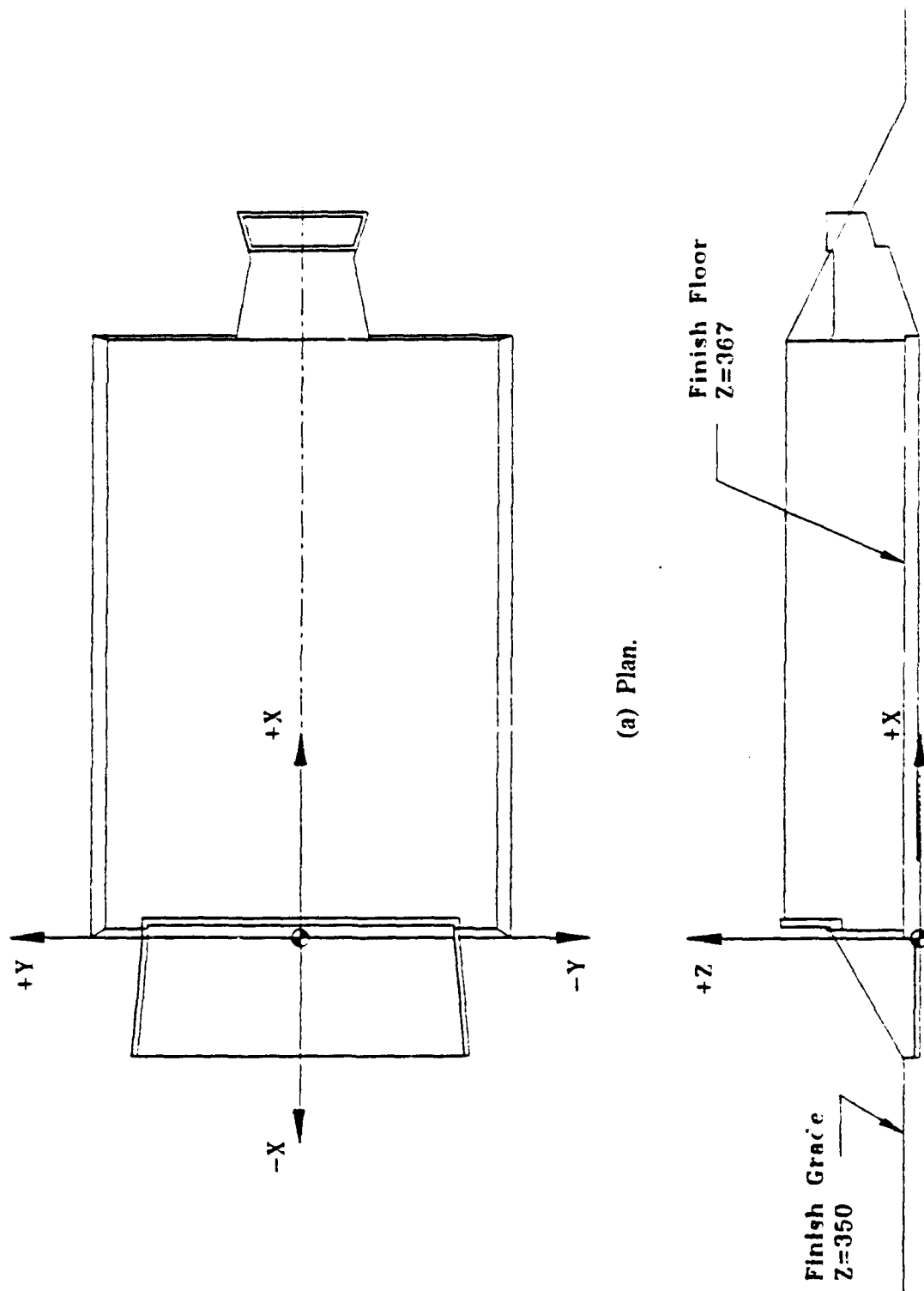
ZONE I.D.	NUMBER RETAINED ON SIEVE											
	SIEVE SIZE (mm)											
	64-51	51-38	38-32	32-25	25-22	22-19	19-16	16-13	13-10	TOTALS		
NS1	0	1	5	9	4	6	24	28	64	141		
NS2	0	0	2	2	3	8	9	34	57	115		
NS3	0	2	2	4	7	11	28	31	67	152		
NS4	0	2	2	1	0	6	5	19	59	94		
NS5	0	0	2	0	2	4	5	12	19	44		
NS6	0	0	0	0	0	1	7	14	36	58		
NS7	0	0	0	0	0	1	0	1	0	2		
NS8	0	0	1	0	0	0	0	1	1	3		
	0	5	14	16	16	37	78	140	303	609		
Ave. Wt.	0.0	96.7	52.2	34.0	18.6	11.2	7.4	4.1	2.4	7.1		
S.F.	0.00	0.46	0.51	0.61	0.60	0.54	0.58	0.57	0.65	0.56		

ZONE	WEIGHT RETAINED ON SIEVE (gm)										TOTALS
	SIEVE SIZE (mm)										
	64-51	51-38	38-32	32-25	25-22	22-19	19-16	16-13	13-10		
BK2	0.0	339.4	732.3	172.3	207.8	291.0	229.3	276.5	287.3	2535.9	
BK3	0.0	201.4	200.2	293.3	101.6	195.1	192.1	231.3	274.2	1689.2	
BK4	0.0	153.2	306.5	320.4	84.5	261.3	234.5	344.5	338.8	2043.7	
BK5	0.0	544.8	390.3	413.9	252.6	424.6	285.7	325.5	313.5	2950.9	
BK6	0.0	107.5	207.5	121.9	174.4	279.4	188.8	185.9	201.1	1466.5	
BK7	0.0	267.5	135.4	123.2	96.2	92.2	206.9	114.0	114.7	1150.1	
BK8	0.0	0.0	268.4	129.4	175.3	74.5	67.1	81.9	60.5	857.1	
BK9	0.0	143.4	84.0	324.4	58.8	97.0	83.8	47.6	27.6	866.6	
BK10	0.0	0.0	120.4	90.9	36.3	42.3	14.4	12.2	13.5	330.0	
BK11	0.0	69.0	0.0	129.8	81.4	24.8	30.2	10.4	11.7	357.3	
BK12	0.0	151.2	86.6	0.0	21.1	31.3	5.4	23.5	15.2	334.3	
BK13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
BK14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
BK15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
BK16	0.0	0.0	0.0	27.2	0.0	0.0	7.5	9.1	2.5	46.3	
BK17	0.0	0.0	0.0	0.0	0.0	20.6	14.0	4.2	2.6	41.4	
Totals	0.0	1977.4	2531.6	2146.7	1290.0	1834.1	1559.7	1666.6	1663.2	14669.3	

ZONE	NUMBER RETAINED ON SIEVE											TOTALS
	SIEVE SIZE (mm)											
	64-51	51-38	38-32	32-25	25-22	22-19	19-16	16-13	13-10			
BK2	0	3	12	5	11	26	31	66	121			275
BK3	0	2	3	10	6	18	25	55	116			235
BK4	0	2	6	11	4	23	32	83	143			304
BK5	0	6	7	13	13	38	39	78	132			326
BK6	0	1	4	4	9	25	26	45	85			199
BK7	0	3	3	4	5	8	29	28	48			128
BK8	0	0	5	4	9	7	9	20	26			80
BK9	0	2	2	10	3	9	11	12	12			61
BK10	0	0	2	3	2	3	2	3	6			21
BK11	0	1	0	4	4	2	4	3	5			23
BK12	0	2	2	0	1	3	1	5	6			20
BK13	0	0	0	0	0	0	0	0	0			0
BK14	0	0	0	0	0	0	0	0	0			0
BK15	0	0	0	0	0	0	0	0	0			0
BK16	0	0	0	1	0	0	1	2	1			5
BK17	0	0	0	0	0	2	2	1	1			6
	0	22	46	69	67	164	212	401	702			1683
Ave. Wt.	0.0	89.9	55.0	31.1	19.3	11.2	7.4	4.2	2.4			8.7
S.F.	0.00	0.42	0.53	0.56	0.62	0.54	0.57	0.57	0.65			0.56

2.2 DEBRIS LOCATION DATA

Figures B-7 and B-8 on the next two pages show the reference system of the coordinates and the range-azimuth. The coordinates and the range and azimuth of each of the pieces of PAS-3 debris collected in the circular collection area are presented next. The data are sorted by the I.D. number (mark) of each piece. I.D. marks not shown in the listing were not used.



(b) Elevation.

Figure B-7. Structure coordinate system, PAS-3.

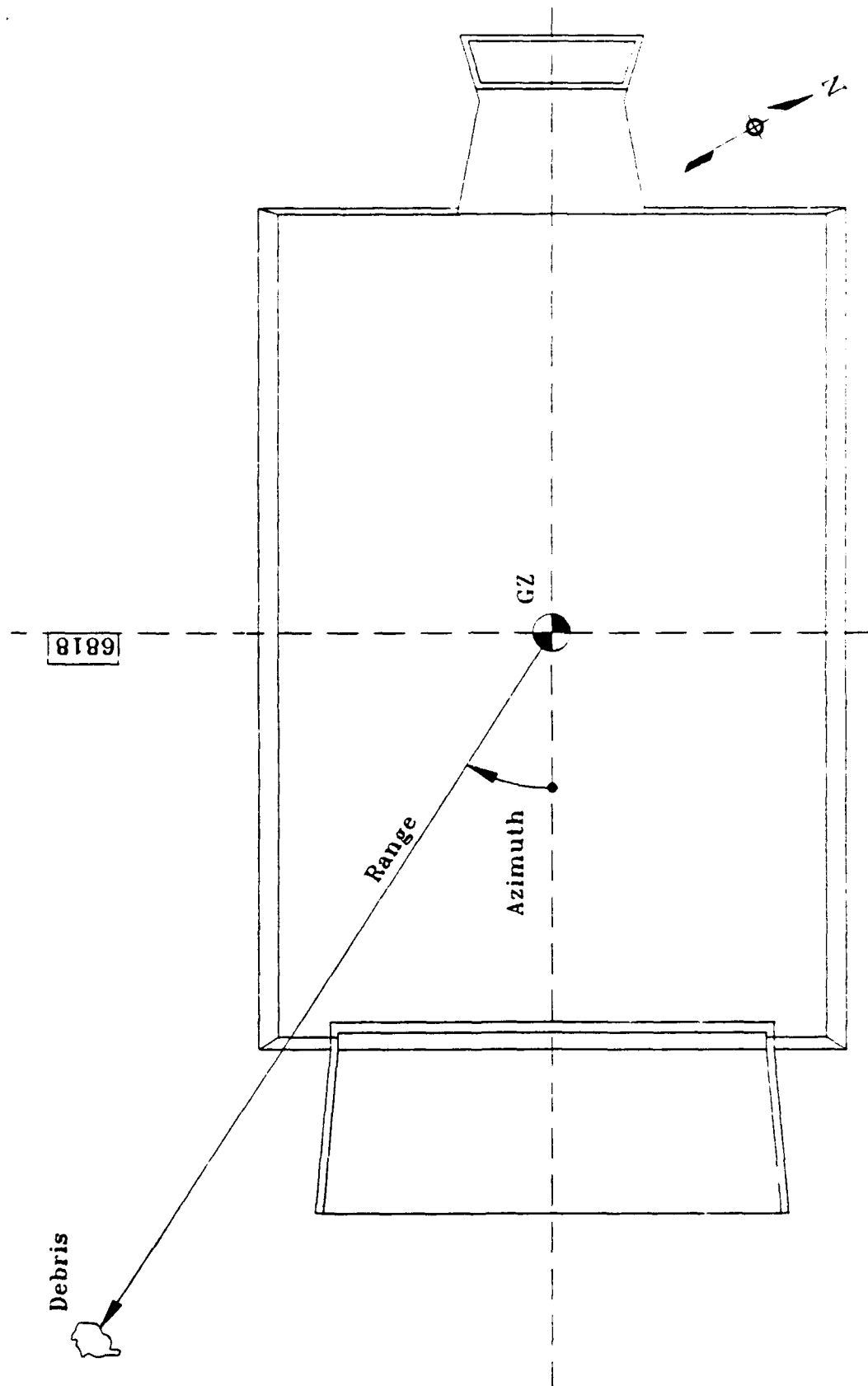


Figure B-8. Range and azimuth reference system, PAS-3.

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
LOCATIONS

I.D. MARK	COORDINATES		FROM GZ:	
	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
2	-123266	100058	164114	37.57
3	-111077	82334	143799	34.93
4	-98801	80882	133031	37.44
5	-128325	44547	142296	18.24
6	-126575	29731	136666	12.57
7	-105051	6666	112068	3.41
8	-88416	6874	95482	4.13
9	-73463	-20014	82739	346.00
10	-113970	-38244	126697	342.43
11	-136402	-94728	171713	326.52
12	-132974	-106186	175549	322.78
13	-140974	-120698	190815	320.76
14	-187268	-60409	203270	342.71
15	-184455	-61291	200853	342.23
16	49616	-129429	136321	251.70
17	51817	-98572	108358	245.46
18	38150	-84270	89906	249.60
19	57974	-70039	86731	233.86
20	68347	-50572	79646	219.42
21	18188	4510	12231	158.36
22	17717	4647	11848	156.91
23	18484	4386	12464	159.39
24	18804	4938	12964	157.61
25	18288	5428	12690	154.67
26	21273	4275	15074	163.53
27	28374	12433	24885	150.02
28	27827	13017	24715	148.22
29	21202	3423	14785	166.61
30	21023	2684	14456	169.30
31	18773	2721	12261	167.18
32	18154	6947	13295	148.50
33	18815	2961	12357	166.13
40	54836	-4186	48200	184.98
41	62634	1103	55827	178.87
42	59895	3403	53186	176.33
43	34523	7459	28692	164.93
44	34175	3677	27603	172.34
45	31093	1323	24311	176.88
46	30756	1241	23970	177.03
47	33965	-10736	29192	201.58
48	26596	-6152	20713	197.28

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
LOCATIONS

I.D. MARK	COORDINATES		FROM GZ:	
	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
49	22796	-5106	16774	197.72
50	33932	1407	27150	177.03
51	35653	882	28849	178.25
52	34520	-1095	27723	182.26
53	33724	-505	26911	181.08
54	34740	-150	27923	180.31
55	32144	3929	25629	171.18
56	35737	3732	29159	172.65
57	32122	5650	25928	167.41
58	34896	2965	28234	173.97
59	39676	3388	33032	174.11
60	56631	-435	49815	180.50
61	51540	2268	44780	177.10
62	45058	557	38244	179.17
63	43045	2610	36321	175.88
64	40109	3866	33515	173.38
65	33733	-400	26918	180.85
66	33619	-4264	27138	189.04
67	34932	-5732	28692	191.52
68	38334	-7604	32420	193.56
69	39317	-6152	33077	190.72
70	39808	-6469	33619	191.09
71	42498	-6081	36195	189.67
72	45098	-8286	39167	192.21
73	50558	-6152	44171	188.01
74	48573	-11539	43321	195.45
75	45674	-14000	41301	199.81
76	48455	-17620	45212	202.94
77	51433	-17959	48094	201.93
78	50479	-20494	48232	205.15
79	41979	-13636	37713	201.20
80	37509	-12423	33110	202.04
81	31988	-11069	27496	203.74
82	31738	-7909	26145	197.61
83	27715	-7536	22214	199.83
84	27465	-8472	22317	202.31
85	27727	-8081	22416	201.13
86	23071	-9121	18637	209.30
87	24333	-6219	18587	199.55
88	23658	-2983	17102	190.04
89	22184	-1705	15460	186.33

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
LOCATIONS

I.D. MARK	COORDINATES		FROM GZ:	
	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
90	21228	-3070	14733	192.03
91	20748	-2272	14114	189.26
92	21549	-1591	14817	186.16
93	21425	-1136	14651	184.45
94	20960	948	14174	176.16
95	24203	2748	17600	171.02
96	19236	1545	12514	172.91
97	35171	2334	28449	175.29
98	33024	3871	26490	171.60
99	26982	1294	20206	176.33
100	24886	-706	18082	182.24
101	20980	-3639	14622	194.41
102	22210	-3707	15832	193.54
103	19369	-5813	13832	204.85
104	28117	-7253	22500	198.80
105	37411	-4287	30892	187.98
106	38431	-3271	31832	185.90
107	40156	-4451	33634	187.61
108	42317	-3070	35631	184.94
109	46725	-1416	39932	182.03
110	37838	-16625	35194	208.19
111	32628	-17952	31440	214.82
112	37597	-36695	47894	230.01
113	39135	-38927	50593	230.30
114	46877	-40053	56648	225.00
115	46041	-45954	60417	229.52
116	52530	-46784	65409	225.66
117	26044	-62264	65164	252.84
118	24153	-60944	63362	254.12
119	79924	-51045	89163	214.92
120	85515	-52611	94663	213.76
121	2834	-26827	27121	278.45
122	4128	-28994	29118	275.30
123	5082	-30731	30780	273.23
124	5588	-32056	32079	272.20
125	6830	-25111	25111	269.97
126	10660	-22178	22508	260.17
127	-1542	-18693	20477	294.10
128	1177	-21125	21865	284.95
130	-5527	-13222	18089	313.04
131	-10098	-12430	20992	323.69

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
LOCATIONS

I.D. MARK	COORDINATES		FROM GZ:	
	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
132	-7959	-4869	15558	341.76
133	-9310	-3043	16412	349.31
134	-10061	-4047	17357	346.52
135	-14873	-3372	21952	351.16
136	-16077	-4839	23401	348.07
137	-19273	-3485	26322	352.39
138	-22856	-245	29675	359.53
141	-23923	707	30749	1.32
142	-24421	-482	31242	359.12
143	-22259	2993	29230	5.88
144	-27063	150	33881	0.25
145	-28632	-874	35460	358.59
146	-27633	-7336	35224	347.98
147	-32728	-10430	40898	345.23
148	-33140	-5815	40379	351.72
150	-32562	-2606	39467	356.21
151	-30656	-2458	37554	356.25
152	-26952	221	33771	0.38
153	-22215	134	29034	0.26
154	-18423	358	25244	0.81
155	-18114	1103	24956	2.53
156	-18322	3830	25430	8.66
157	-24597	12709	33889	22.03
158	-13782	-1598	20662	355.56
159	-7512	-1128	14374	355.50
160	-5604	-432	12430	358.01
161	-3793	-1316	10693	352.93
162	-6091	2214	13098	9.73
163	-7598	7456	16230	27.35
164	-6341	6075	14494	24.78
165	-5489	5772	13594	25.13
166	-5366	9439	15413	37.77
167	-3183	12853	16286	52.11
168	-4420	10749	15551	43.73
169	-5894	23152	26413	61.23
170	-3994	21275	23865	63.06
171	-15734	30242	37725	53.29
172	-18927	13604	29118	27.85
173	-18849	8149	26930	17.61
174	-19923	5097	27223	10.79
175	-20478	3441	27512	7.18

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
LOCATIONS

I.D. MARK	COORDINATES		FROM GZ:	
	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
176	-21168	773	27997	1.58
177	-40767	-4831	47830	354.20
178	-44426	-6050	51600	353.27
179	-41082	-6563	48347	352.20
180	-40780	-319	47599	359.62
181	-42267	20	49085	0.02
182	-41535	-10056	49388	348.25
183	-45952	-13318	54424	345.84
184	-45805	-18053	55634	341.07
185	-45790	-18066	55624	341.05
186	-41156	-18901	51563	338.50
187	-58292	-26688	70367	337.71
189	-54532	-35415	70838	330.00
190	-53241	-40112	72222	326.26
191	-46092	-44150	68910	320.16
192	-28210	-31255	46945	318.26
193	-24719	-18571	36599	329.51
194	-23489	-18142	35322	329.10
195	-30158	-18122	41178	333.89
196	-28502	-10187	36760	343.91
197	-27739	-5845	35048	350.40
198	-32708	-8133	40354	348.37
199	-37671	-8990	45388	348.58
200	-38160	-15487	47570	341.00
201	-35025	-16597	45014	338.36
202	-16498	-22414	32342	316.13
203	-17095	-19729	31001	320.48
204	-19520	-15528	30575	329.48
205	-18495	-14902	29373	329.51
206	-21040	-13468	30943	334.20
207	-21810	-8596	29891	343.29
208	-19408	-11729	28729	335.90
209	-19311	-9005	27637	340.98
210	-20336	-8478	28447	342.66
211	-21386	-8285	29395	343.63
212	-22492	-5192	29766	349.95
213	-25714	-2797	32652	355.09
214	-25445	-765	32272	358.64
215	-24301	2646	31231	4.86
216	-26538	5936	33881	10.09
217	-26031	10858	34597	18.29

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
LOCATIONS

I.D. MARK	COORDINATES		FROM GZ:	
	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
218	-32427	9761	40440	13.97
219	-23713	16694	34797	28.67
220	-21390	1257	28236	2.55
221	-20458	351	27278	0.74
222	-22841	-519	29663	359.00
223	-22666	-1967	29550	356.18
224	-22956	-1912	29836	356.33
225	-21378	-3446	28406	353.03
226	-19014	-5989	26517	346.95
227	-17720	-7442	25642	343.13
228	-16594	-11215	25959	334.40
229	-16522	-13706	27067	329.58
230	-16144	-15778	27860	325.51
231	-12802	-19787	27866	314.76
232	-12358	-23722	30503	308.95
233	-8679	-24191	28729	302.64
234	-8508	-21452	26364	305.54
235	-6663	-25237	28612	298.11
236	-9613	-18471	24722	311.66
237	-12662	-17454	26156	318.14
238	-13384	-17268	26577	319.48
240	-14440	-16316	26797	322.49
241	-15559	-12510	25637	330.79
242	-17433	-5251	24813	347.78
243	-16735	-7581	24743	342.16
244	-14846	-7825	23034	340.14
245	-15743	-10550	24906	334.94
246	-12715	-13150	23547	326.05
247	-10483	-3366	17625	348.99
248	-13822	-4198	21062	348.50
249	-14505	-1491	21375	356.00
250	-15146	-230	21965	359.40
251	-15127	1316	21984	3.43
252	-14786	1600	21663	4.23
253	-15230	3801	22373	9.78
254	-15377	3698	22501	9.46
255	-13982	5347	21476	14.42
256	-13017	1434	19886	4.14
257	-14165	-251	20984	359.31
258	-14500	-1448	21367	356.11
259	-11777	-821	18613	357.47

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
LOCATIONS

I.D. MARK	COORDINATES		FROM GZ:	
	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
260	-11401	-59	18219	359.82
261	-10706	2731	17735	8.86
262	-10559	2467	17551	8.08
263	-10319	2571	17329	8.53
264	-8329	3643	15579	13.53
265	-4785	5229	12727	24.26
266	-5726	4218	13235	18.59
267	-4403	5949	12701	27.93
269	-4169	1630	11107	8.44
270	-3037	-375	9862	357.82
271	-7559	-18547	23467	307.78
272	-7115	-17891	22676	307.91
273	-7485	-11611	18423	320.93
274	-7049	-11689	18136	319.87
275	-8036	-10752	18337	324.10
276	-9348	-7762	17933	334.35
277	-10682	-7300	18962	337.36
278	-8545	-5783	16415	339.37
279	-7908	-6432	16070	336.40
280	-7374	-5525	15230	338.73
282	-9275	-4532	16719	344.27
283	-8606	-4332	16021	344.31
284	-7074	-2897	14191	348.22
285	-6836	-2730	13925	348.69
286	-6148	-3052	13320	346.76
287	-5799	-2675	12897	348.03
288	-5996	-2740	13104	347.93
289	-5310	-5361	13260	336.15
290	-5312	-6072	13565	333.41
292	-5377	-7678	14411	327.81
294	-6904	-7562	15667	331.14
295	-7026	-7260	15632	332.33
296	-6122	-15745	20380	309.41
297	-6543	-19882	23955	303.90
298	-3041	-20873	23084	295.28
299	-1713	-21825	23433	291.35
300	-828	-22399	23668	288.85
301	-584	-23071	24230	287.79
302	-457	-22852	23982	287.66
303	118	-22978	23934	286.26
304	-24	-23399	24379	286.30

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
LOCATIONS

I.D. MARK	COORDINATES		FROM GZ:	
	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
305	-302	-23285	24349	287.00
306	-2074	-23100	24752	291.05
307	-2786	-26880	28544	289.66
308	-1881	-29577	30830	286.39
309	-1290	-30302	31368	284.98
310	-1328	-34094	35054	283.44
311	145	-31009	31719	282.14
312	3081	-32908	33119	276.48
313	3764	-36494	36621	274.78
314	2594	-25151	25503	279.53
315	384	-26906	27664	283.45
316	1224	-23392	24052	283.45
317	1584	-23235	23817	282.69
318	1548	-24867	25419	281.97
319	3099	-26004	26269	278.14
320	2882	-23092	23425	279.67
321	2833	-22765	23111	279.93
322	3594	-22303	22535	278.22
323	3247	-23377	23649	278.68
325	4315	-21375	21521	276.68
326	4072	-20936	21115	277.47
328	4334	-21714	21856	276.53
329	2884	-13430	13994	286.32
330	2994	-13173	13717	286.19
331	3341	-13343	13789	284.61
332	5065	-22977	23044	274.36
333	5045	-12703	12827	277.94
334	4627	-12216	12411	280.17
335	3818	-9395	9862	287.71
336	3808	-9586	10047	287.43
337	5875	-9656	9702	275.58
338	6388	-9052	9062	272.72
339	6578	-8351	8355	271.64
340	6257	-7813	7833	274.11
341	8373	-10072	10191	261.22
342	7346	-11454	11466	267.36
343	7004	-11092	11093	269.04
344	7268	-12013	12022	267.86
345	7405	-11425	11440	267.06
346	7535	-10906	10930	266.24
347	6144	-10634	10655	273.63

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
LOCATIONS

I.D. MARK	COORDINATES		FROM GZ:	
	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
348	8459	-10805	10928	261.37
349	9054	-9933	10182	257.31
350	9415	-10718	11028	256.38
351	9161	-12689	12903	259.54
352	8789	-12745	12897	261.21
353	8941	-23849	23944	264.91
354	6280	-26483	26488	271.16
355	6178	-26764	26772	271.37
356	6029	-24496	24508	271.85
357	12958	-11858	13354	242.63
358	10027	-9685	10203	251.67
359	10170	-9732	10293	250.99
360	14025	-8441	11099	229.51
361	15224	-12043	14686	235.09
362	14124	-12992	14905	240.65
363	19828	-15723	20408	230.39
364	20028	-4262	13880	197.88
365	20566	-2104	13908	188.70
366	25718	-3222	19172	189.67
367	24725	-2864	18134	189.09
368	23329	-3258	16830	191.16
369	27337	-3878	20882	190.70
370	28470	-3756	21976	189.84
371	34901	1733	28136	176.47
372	34427	799	27621	178.34
373	31830	2682	25156	173.88
374	29241	1908	22504	175.14
375	33504	1129	26710	177.58
376	33222	1046	26425	177.73
377	25085	955	18291	177.01
378	24848	306	18033	179.03
379	23019	1508	16271	174.68
380	23442	2625	16830	171.03
381	25003	2873	18410	171.02
382	27110	3746	20635	169.54
383	22126	1515	15383	174.35
384	3643	26305	26496	83.12
385	1771	25016	25520	78.59
386	207	24579	25452	74.95
387	-2242	25447	27012	70.40
388	-2694	22744	24653	67.30

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
LOCATIONS

I.D. MARK	COORDINATES		FROM GZ:	
	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
389	-62	20897	22001	71.78
390	-153	23357	24376	73.38
391	5262	23815	23866	86.26
392	2384	18668	19187	76.64
393	5941	16609	16632	86.98
394	5783	14852	14888	86.01
395	-268	29852	30681	76.65
396	10549	49472	49612	94.31
397	9086	54596	54643	92.38
398	-6559	1523	13463	6.50
399	-6441	1381	13331	5.94
400	-4139	1654	11081	8.58
401	-3387	1384	10298	7.72
402	-2801	810	9653	4.81
403	-4991	-713	11830	356.54
404	-6979	-845	13823	356.49
405	-9091	-2206	16062	352.10
406	-9587	-1765	16500	353.86
407	-10490	-4024	17770	346.91
408	-10266	-3641	17467	347.97
409	-11450	-3495	18599	349.17
410	-10623	-4860	18106	344.43
411	-6884	-7517	15629	331.25
412	-6957	-7798	15829	330.48
413	-5380	-7642	14394	327.93
414	-2832	-5986	11356	328.19
415	-3166	-5244	11277	332.29
416	-18619	4160	25775	9.29
417	-66760	6017	73823	4.67
418	-73703	1722	80540	1.23
419	-84781	10143	92159	6.32
420	-61871	-14311	70164	348.23
421	-56027	15545	64739	13.89
422	-73531	20466	82915	14.29
423	-70847	15724	79241	11.45
424	-86938	47729	105206	26.98
425	-95569	47411	112831	24.85
426	-79254	46143	97660	28.20
427	-76245	52535	98283	32.31
428	-52538	35008	68911	30.53
429	-67991	11561	75697	8.78

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
LOCATIONS

I.D. MARK	COORDINATES		FROM GZ:	
	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
430	-33001	26378	47763	33.52
431	-38939	20350	50078	23.98
432	-2827	17753	20204	61.49
433	-2390	20698	22654	66.02
434	-3187	20337	22665	63.80
435	-1394	16189	18152	63.10
436	-278	17324	18721	67.73
437	130	18429	19605	70.05
438	1393	18406	19189	73.58
439	-1379	19204	20881	66.88
440	-3232	15668	18614	57.32
441	-2676	13428	16445	54.74
442	-2353	11485	14698	51.39
443	-2677	9694	13569	45.59
444	-2231	9104	12836	45.18
445	-3998	5691	12222	27.75
446	-6573	5762	14578	23.28
447	-6771	5442	14639	21.83
448	-7414	2571	14462	10.24
449	-5607	3288	12853	14.82
450	-6357	3153	13547	13.46
451	-7022	3501	14276	14.19
452	-7145	3327	14354	13.40
453	-7749	2340	14754	9.13
454	-10041	1607	16935	5.45
455	-10639	1704	17540	5.57
456	-11752	2460	18732	7.55
457	-10263	-376	17085	358.74
458	-10413	-403	17236	358.66
459	-9490	-763	16326	357.32
460	-6393	-934	13244	355.96
461	-6669	-1116	13533	355.27
462	-5545	-532	12375	357.54
463	-4613	-2311	11662	348.57
464	-4386	-4543	12090	337.93
465	-3290	-3794	10797	339.43
466	-3135	-3415	10522	341.06
468	-3407	-2861	10618	344.37
469	-3118	-2007	10137	348.58
470	-4066	-380	10891	358.00
471	-2945	4914	10930	26.72

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
LOCATIONS

I.D. MARK	COORDINATES		FROM GZ:	
	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
472	-1976	7001	11241	38.52
473	1127	11095	12469	62.85
474	2726	7759	8772	62.19
475	14438	7534	10716	135.32
476	16712	8257	12887	140.15
477	20686	801	13892	176.69
478	21065	827	14271	176.68
479	21353	56	14535	179.78
480	22899	1670	16167	174.07
481	24215	404	17401	178.67
482	23594	984	16805	176.64
483	24303	-302	17488	180.99
484	27565	-2902	20949	187.96
485	24346	5897	18494	161.40
486	28335	-4411	21965	191.58
487	31606	-4897	25267	191.18
488	32449	-6821	26523	194.90
489	31306	-6294	25284	194.41
490	30931	-3510	24367	188.28
491	35460	-5348	29137	190.58
492	34402	-1505	27625	183.12
493	34385	-1347	27600	182.80
494	34991	595	28179	178.79
495	36740	1952	29985	176.27
496	35104	4027	28572	171.90
497	35398	4341	28908	171.36
498	36242	2177	29505	175.77
499	37950	2074	31201	176.19
500	38898	1906	32137	176.60
501	38239	1397	31452	177.45
502	41152	3567	34519	174.07
503	40778	3558	34146	174.02
504	41665	4800	35176	172.16
505	38632	6623	32496	168.24
506	37159	9030	31657	163.43
507	38497	9321	33022	163.60
508	40052	12889	35646	158.80
509	43781	8253	37873	167.41
510	36087	11211	31342	159.04
511	42087	2376	35349	176.15
512	43363	3281	36692	174.87

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
LOCATIONS

I.D. MARK	COORDINATES		FROM GZ:	
	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
513	44036	3269	37361	174.98
514	44266	1812	37491	177.23
515	44712	-629	37899	180.95
516	44468	-69	37650	180.10
517	46524	-1893	39751	182.73
518	45448	-4727	38918	186.98
519	38830	-1541	32050	182.76
520	38782	-1419	31995	182.54
521	38889	-2232	32148	183.98
522	39059	-1825	32293	183.24
523	40253	355	33437	179.39
524	41269	1764	34496	177.07
525	51419	-1987	44645	182.55
526	52701	-3536	46019	184.41
527	54098	-1645	47309	181.99
528	55043	1346	48244	178.40
529	54944	1391	48146	178.34
530	51655	4862	45100	173.81
531	52207	5443	45714	173.16
532	53055	5328	46543	173.43
533	46776	5861	40385	171.66
534	1858	18150	18815	74.71
535	53425	6756	47095	171.75
536	56670	9495	50748	169.22
537	53210	4206	46582	174.82
538	53763	4266	47138	174.81
539	53800	2112	47030	177.43
540	53061	-4802	46492	185.93
541	59860	-307	53043	180.33
542	62675	-7754	56393	187.90
543	46637	6380	40327	170.90
544	58988	-10113	53141	190.97
545	58820	-10171	52987	191.07
546	58775	-10065	52923	190.96
547	60540	-9411	54540	189.94
548	37243	1352	30455	177.45
549	34663	2241	27935	175.40
550	33625	2186	26896	175.34
551	33104	1958	26359	175.74
552	32229	1875	25481	175.78
553	30282	1748	23529	175.74

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
LOCATIONS

I.D. MARK	COORDINATES		FROM GZ:	
	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
554	26874	1051	20083	177.00
555	25701	3485	19202	169.54
556	31495	-1017	24698	182.36
557	31877	-1220	25088	182.79
558	42884	-5569	36493	188.78
559	43564	-4817	37060	187.47
560	43836	-3598	37192	185.55
561	44152	-3040	37458	184.66
562	44469	-3109	37779	184.72
563	43074	2553	36346	175.97
564	45042	7816	39015	168.44
565	48359	5719	41933	172.16
566	47470	4159	40864	174.16
567	48585	2184	41824	177.01
568	48702	1525	41912	177.91
569	49361	-5142	42853	186.89
570	50405	-8390	44387	190.89
571	51104	-7596	44933	189.73
572	55112	-8799	49089	190.33
573	61174	-2741	54425	182.89
574	61169	-1239	54365	181.31
575	64743	-6454	58284	186.36
576	66516	-7224	60134	186.90
577	66292	-4249	59625	184.09
578	70423	-1443	63621	181.30
579	71524	-683	64710	180.60
580	72407	-1864	65615	181.63
581	62924	2690	56170	177.25
582	67411	14840	62384	166.24
583	62652	14555	57700	165.39
584	77608	11089	71653	171.10
585	73699	5336	67094	175.44
586	85553	14020	79974	169.90
587	85444	14027	79868	169.88
588	86462	13556	80789	170.34
589	89979	12699	84125	171.32
590	87194	1410	80389	178.99
591	92780	-6204	86185	184.13
592	102595	-4782	95896	182.86
593	104289	483	97473	179.72
594	115633	-2433	108842	181.28

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
LOCATIONS

I.D. MARK	COORDINATES		FROM GZ:	
	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
595	119016	-10231	112663	185.21
596	123853	-9790	117444	184.78
597	121940	-1483	115131	180.74
598	144747	5683	138046	177.64
599	148084	4829	141349	178.04
600	160228	535	153411	179.80
601	159725	3019	152973	178.87
602	145780	-14788	139746	186.07
603	138672	-18348	133124	187.92
604	119183	-25756	115279	192.91
605	115988	-26062	112238	193.43
606	112234	-28782	109275	195.27
610	26780	23478	30817	130.37
611	31318	5805	25178	166.67
612	29007	10028	24350	155.68
613	33289	-1375	26506	182.97
614	34369	859	27564	178.21
615	33052	451	26238	179.01
616	31283	-291	24467	180.68
617	27520	236	20703	179.35
618	27923	3601	21410	170.32
619	29286	5500	23131	166.25
620	29945	7391	24279	162.28
621	37639	1095	30841	177.97
622	112002	7404	105444	175.97
623	148165	49925	149905	160.55
624	149046	50534	150938	160.44
625	162663	47263	162854	163.13
626	175527	6283	168826	177.87
627	123347	-61335	131685	207.76
628	96446	-72362	115194	218.92
629	82501	-65424	100041	220.84
630	76582	-56624	89851	219.06
631	60159	-45067	69831	220.19
632	55661	-25656	55171	207.71
633	64662	-12076	59092	191.79
634	77741	-16092	72725	192.78
635	80409	-16088	75329	192.33
636	91919	-5827	85300	183.92
637	113372	-9088	106941	184.87
638	113217	-9345	106809	185.02

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
LOCATIONS

I.D. MARK	COORDINATES		FROM GZ:	
	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
639	111426	-13341	105455	187.27
640	98124	-20639	93609	192.74
641	78019	5752	71433	175.38
642	-78326	32074	90985	20.64
643	-112803	31480	123694	14.74
644	-133352	36057	144734	14.43
645	-147539	35648	158420	13.00
646	-157246	38657	168557	13.26

2.3. DEBRIS IDENTIFICATION DATA

The measured and observed characteristics of each piece of PAS-3 debris collected in the circular collection area are presented. The shape factor was calculated based on the weight and dimensions for each piece. The data are sorted by the I.D. number (mark) of each piece. I.D. marks not shown in the listing were not used.

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
IDENTIFICATION

I.D. MARK	DIMENSIONS			WEIGHT (gm)	COLOR		OTHER IDENTIFYING MARKS	SHAPE FACTOR
	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)		CONCRETE	BEAD		
2	95	60	30	219.6	R		1 White Side	0.5351
3	65	45	28	67.3	R		1 White Side	0.3424
4	45	55	36	78.6	R/Y		1 White Side	0.3676
5	56	60	41	195.9	R			0.5925
6	95	51	42	192.2	R			0.3935
7	105	53	55	390.4	R			0.5315
8	135	90	75	1065.7	Y	G	1 White Side	0.4873
9	80	55	15	80.8	N		1 White Side	0.5101
10	105	56	34	181.1	Y	G		0.3774
11	110	60	34	206.0	B/Y		1 White Side	0.3825
12	63	41	39	141.9	R		1 White Side	0.5869
13	60	55	38	164.9	Y		1 White Side	0.5479
14	78	53	46	173.3	R		1 White Side	0.3797
15	55	70	40	119.0	Y		1 White Side	0.3220
16	60	28	30	51.0	R		1 White Side	0.4216
17	67	38	39	96.1	R	R	1 White Side	0.4033
18	145	60	45	391.2	Y		1 White Side	0.4163
19	65	45	47	199.7	Y	R	1 White Side	0.6053
20	150	135	64	1164.4	Y		1 White Side	0.3744
21	155	42	40	251.5	N		1 Flat side	0.4024
22	92	43	33	140.3	N		2 Flat Sides	0.4478
23	80	41	39	102.4	N		2 Flat Sides	0.3335
24	78	37	45	79.1	N		2 Flat sides	0.2541
25	80	50	19	70.3	Y			0.3854
26	70	63	45	163.1	N		1 Flat Side	0.3424
27	180	85	95	1125.1	Y	R	1 White Side	0.3225
28	95	50	80	527.4	Y	R	1 White Side	0.5783
29	120	50	42	315.1	N		1 Flat Side	0.5210

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
IDENTIFICATION

I.D. MARK	DIMENSIONS			WEIGHT (gm)	COLOR		OTHER IDENTIFYING MARKS	SHAPE FACTOR
	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)		CONCRETE	BEAD		
30	170	60	36	283.4	N		1 Flat Side	0.3216
31	90	40	50	208.4	N		1 Flat Side	0.4824
32	120	45	20	108.8	N		1 Flat Side	0.4198
33	77	50	32	110.5	N		1 Flat Side	0.3737
40	370	235	75	11893.2	Y	Y	1 White Side	0.7599
41	255	115	120	3845.2	Y	R	1 White Side	0.4553
42	105	90	63	527.7	N		1 Flat Side	0.3693
43	460	130	85	7661.9	Y	R	1 White Side	0.6281
44	250	77	100	2079.4	Y	R	1 White Side	0.4501
45	210	140	88	2558.6	Y		1 White Side	0.4121
46	175	110	65	1776.2	N		1 Flat side	0.5915
47	235	220	95	5376.3	Y	R	1 White Side	0.4561
48	122	75	43	433.5	Y			0.4591
49	105	100	70	961.8	N		2 Flat Sides	0.5452
50	150	80	91	1467.6	N		1 Flat Side	0.5600
51	160	120	65	1840.9	N			0.6146
52	180	85	94	1820.4	N		1 Flat Side	0.5274
53	115	82	80	885.0	N		1 Flat Side	0.4888
54	94	75	67	388.7	N		1 Flat Side	0.3429
55	105	50	70	550.1	N		1 Flat Side	0.6237
56	130	75	70	816.9	N			0.4987
57	115	85	76	791.0	N			0.4436
58	80	71	62	461.5	N			0.5460
59	95	120	80	1240.6	N		1 Flat Side	0.5668
60	185	110	80	1624.6	N		1 Flat Side	0.4158
61	142	95	80	1270.7	N		1 Flat Side	0.4906
62	160	130	90	1719.5	N		1 Flat Side	0.3827
63	135	101	75	1190.6	N			0.4851

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
IDENTIFICATION

I.D. MARK	DIMENSIONS			WEIGHT (gm)	COLOR		OTHER IDENTIFYING MARKS	SHAPE FACTOR
	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)		CONCRETE	BEAD		
64	87	105	80	671.2	N			0.3827
65	100	80	40	260.2	N			0.3388
66	175	65	56	580.1	N			0.3794
67	80	50	51	174.6	Y	R	1 White Side	0.3566
68	130	95	60	392.9	N		1 Flat Side	0.2209
69	55	75	70	225.6	Y		1 White Side	0.3255
70	75	80	46	255.6	N			0.3859
71	105	80	55	388.6	N			0.3505
72	90	80	90	660.8	N			0.4249
73	70	55	66	272.1	N			0.4462
74	95	85	80	766.8	N			0.4946
75	100	65	75	603.1	N		1 Flat Side	0.5155
76	115	95	71	720.7	N		1 Flat side	0.3871
77	100	75	75	814.5	N		1 Flat side	0.6033
78	65	55	40	189.6	N		1 Flat side	0.5524
79	145	95	58	685.6	N			0.3576
80	95	65	40	243.1	N		1 Flat side	0.4101
81	123	90	45	523.7	N		1 Flat side	0.4380
82	90	45	58	314.2	Y			0.5573
83	140	115	80	1319.2	Y	R	1 White Side	0.4268
84	120	115	70	1548.1	Y		1 White Side	0.6677
85	160	90	75	1101.2	Y	R	1 White Side	0.4248
86	124	90	73	981.8	N		2 Flat Sides	0.5021
87	100	83	70	439.8	N		1 Flat Side	0.3154
88	85	70	65	251.6	N			0.2711
89	126	100	80	1108.5	N		2 Flat Sides	0.4582
90	170	80	76	1085.1	N		1 Flat Side	0.4374
91	155	120	52	637.8	Y	R	1 White Side	0.2748

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
IDENTIFICATION

I.D. MARK	DIMENSIONS			WEIGHT (gm)	COLOR		OTHER IDENTIFYING MARKS	SHAPE FACTOR
	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)		CONCRETE	BEAD		
92	135	80	65	666.0	N		1 Flat Side	0.3953
93	145	93	73	831.8	N		2 Flat Sides	0.3521
94	155	114	105	3082.6	N		2 Flat Sides	0.6923
95	120	90	85	799.1	N		2 Flat Sides	0.3627
96	227	155	95	3575.4	N		1 Flat Side	0.4457
97	125	87	42	353.9	N			0.3228
98	100	55	37	200.1	N		1 Flat Side	0.4097
99	102	55	35	175.3	N		1 Flat Side	0.3720
100	140	50	57	482.3	N			0.5037
101	95	55	61	416.2	N			0.5441
102	90	80	35	182.3	N			0.3014
103	200	95	60	1404.9	N		2 Flat Sides	0.5135
104	110	55	50	192.7	Y		1 White Side	0.2654
105	110	57	40	290.7	N		1 Flat Side	0.4830
106	97	87	78	976.2	N		1 Flat Side	0.6179
107	120	77	45	353.3	Y			0.3540
108	140	80	84	1143.4	N		1 Flat Side	0.5064
109	98	80	33	355.6	N			0.5727
110	85	86	50	319.2	N			0.3639
111	147	60	95	677.6	Y		1 White Side	0.3370
112	92	51	40	150.7	Y		1 White Side	0.3346
113	83	45	44	176.7	B/R	R	1 White Side	0.4480
114	170	55	60	497.8	Y		1 White Side	0.3697
115	83	70	26	172.7	R	R		0.4764
116	135	65	41	231.1	Y	Y	1 White Side	0.2676
117	115	56	60	694.8	Y	R/B	1 White Side	0.7492
118	122	85	55	751.2	Y		1 White Side	0.5488
119	95	57	88	619.8	N		2 Flat Sides	0.5419

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
IDENTIFICATION

I.D. MARK	DIMENSIONS			WEIGHT (gm)	COLOR		OTHER IDENTIFYING MARKS	SHAPE FACTOR
	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)		CONCRETE	BEAD		
120	80	65	45	216.9	Y		1 White Side	0.3862
121	365	190	80	7248.4	Y	Y	1 White Side	0.5444
122	140	100	60	1061.4	Y	Y	1 White Side	0.5265
123	180	160	60	2231.7	Y	Y	1 White Side	0.5381
124	150	51	55	502.6	Y		1 White Side	0.4977
125	135	120	58	689.0	Y	Y		0.3055
126	90	47	48	217.2	Y	Y		0.4457
127	160	75	40	518.4	Y		1 White Side	0.4500
128	117	75	73	829.9	Y	R	1 White Side	0.5398
130	225	200	65	3978.0	Y	B	1 White Side	0.5667
131	85	80	44	354.0	R/B			0.4930
132	105	110	90	971.3	N		1 White Side	0.3893
133	80	115	51	533.6	N			0.4739
134	81	55	86	514.9	R			0.5600
135	330	130	90	4676.5	N		1 White w/Black Si	0.5047
136	80	60	49	297.7	R		1 White Side	0.5274
137	100	105	67	868.9	Y	G		0.5146
138	100	95	80	782.4	N			0.4289
141	110	80	75	654.7	N			0.4133
142	145	65	35	430.4	R		1 White Side	0.5436
143	150	153	65	1187.4	Y		1 White Side	0.3317
144	70	80	56	653.1	N			0.8677
145	85	66	67	323.4	N			0.3585
146	103	80	41	306.2	N			0.3776
147	150	90	50	661.2	Y	G	1 White Side	0.4081
148	130	130	78	699.9	Y	G	1 White Side	0.2212
150	65	35	60	169.7	N		1 Flat Side	0.5180
151	70	56	34	133.7	N			0.4180

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
IDENTIFICATION

I.D. MARK	DIMENSIONS			WEIGHT (gm)	COLOR		OTHER IDENTIFYING MARKS	SHAPE FACTOR
	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)		CONCRETE	BEAD		
152	135	70	44	131.9	N		1 Flat Side	0.1322
153	115	60	62	373.7	N			0.3640
154	110	80	55	432.8	B/R			0.3726
155	112	45	31	180.6	R		1 Flat Side	0.4816
156	134	95	40	681.1	N		1 Flat Side	0.5573
157	115	65	80	882.3	R/B		1 White Side	0.6148
158	155	180	90	2907.5	N		1 White w/Black Si	0.4825
159	115	75	55	429.9	Y	Y	1 White Side	0.3776
160	260	190	85	3869.1	R			0.3839
161	110	75	57	441.0	Y		1 White Side	0.3907
162	125	75	45	426.7	Y			0.4214
163	245	145	52	1258.9	R			0.2840
164	80	70	30	211.4	N		1 Flat side	0.5243
165	100	80	21	155.5	R		1 White Side	0.3857
166	125	60	80	510.2	Y	Y	1 Flat side	0.3543
167	143	48	70	702.9	Y			0.6095
168	110	80	80	699.5	Y			0.4140
169	95	50	58	290.4	Y		1 White Side	0.4392
170	55	40	50	98.6	Y	Y	1 White Side	0.3735
171	80	35	55	130.7	Y	B	1 White Side	0.3536
172	75	80	52	322.6	B		2 Flat sides/1 White	0.4308
173	135	62	50	365.7	Y			0.3641
174	65	48	42	118.5	N		1 White Side	0.3768
175	70	55	24	107.3	N		2 White Sides	0.4839
176	190	40	44	116.8	R			0.1455
177	120	68	45	340.0	Y	G	1 White Side	0.3858
178	135	75	65	666.1	Y	G	1 White Side	0.4217
179	60	50	42	125.5	N			0.4150

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
IDENTIFICATION

I.D. MARK	DIMENSIONS			WEIGHT (gm)	COLOR		OTHER IDENTIFYING MARKS	SHAPE FACTOR
	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)		CONCRETE	BEAD		
180	120	70	75	698.9	N			0.4622
181	75	45	24	88.6	N		1 White Side	0.4558
182	105	38	35	131.8	B		1 White Side	0.3932
183	85	38	38	191.8	N		1 White Side	0.6511
184	78	65	31	197.9	Y		1 White Side	0.5246
185	75	60	25	81.5	Y		1 White Side	0.3019
186	103	68	53	261.5	Y			0.2935
187	88	42	40	153.1	N		1 White Side	0.4315
189	70	55	13	63.9	N		1 White Side	0.5320
190	102	59	45	297.9	Y			0.4583
191	122	90	65	757.6	Y		1 Flat White Edge	0.4423
192	115	50	49	274.2	N		1 Flat Side W/Red	0.4055
193	64	60	33	108.6	N			0.3571
194	95	53	45	198.2	N		1 Flat side	0.3645
195	125	69	50	529.5	Y			0.5116
196	82	48	31	108.0	Y		1 White Side	0.3688
197	63	54	29	84.0	N		1 White Side	0.3548
198	66	70	22	135.8	N		1 White Side w/Blk	0.5567
199	80	54	20	92.4	Y		1 Flat Side	0.4456
200	83	40	52	188.4	Y			0.4547
201	83	50	32	97.9	Y			0.3072
202	54	41	25	60.5	R		1 White Side	0.4554
203	101	53	58	289.3	R		1 Flat Side	0.3883
204	87	66	33	173.8	N		1 Flat Side	0.3822
205	80	60	36	118.7	R		1 White Side	0.2862
206	70	40	28	64.6	R			0.3433
207	92	51	35	112.5	R		1 Flat Side	0.2855
208	90	80	47	225.0	R		1 White Side	0.2770

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
IDENTIFICATION

I.D. MARK	DIMENSIONS			WEIGHT (gm)	COLOR		OTHER IDENTIFYING MARKS	SHAPE FACTOR
	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)		CONCRETE	BEAD		
209	95	50	26	109.6	Y	G	1 Flat Side	0.3698
210	91	55	28	141.4	Y			0.4204
211	72	55	19	82.6	N		1 White Side	0.4574
212	55	45	23	64.2	R			0.4699
213	65	50	25	77.8	Y	B		0.3990
214	70	28	28	45.2	R		1 White Side	0.3432
215	64	55	43	115.2	N			0.3171
216	68	56	18	62.8	R		1 White Side	0.3817
217	85	50	21	90.3	R		1 White Side	0.4216
218	89	40	35	108.8	Y		1 Flat Side	0.3638
219	63	55	35	99.1	R			0.3405
220	60	40	48	104.9	N		1 White Side	0.3794
221	50	44	25	66.5	R		1 White Side	0.5038
222	105	60	31	162.7	R		1 White Side	0.3471
223	90	53	35	124.7	Y		1 White Side	0.3112
224	75	30	24	57.5	R		1 White Side	0.4437
225	83	44	15	61.0	B/R		1 White Side	0.4640
226	94	54	25	106.0	R		1 Flat Side	0.3480
227	105	60	56	264.7	R/B		1 White Side	0.3126
228	80	55	38	171.8	R		1 White Side	0.4281
229	105	53	124	818.0	N		1 White Side	0.4939
230	77	68	34	124.4	N		1 Flat Side	0.2912
231	85	46	58	278.5	B		1 White Side	0.5117
232	80	73	65	416.9	R/B	G	1 White Side	0.4576
233	78	52	20	75.5	R/B		1 Flat Side	0.3878
234	58	30	60	102.8	B/R	G	1 White Side	0.4103
235	55	58	38	105.5	Y			0.3626
236	72	36	40	101.8	Y			0.4091

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
IDENTIFICATION

I.D. MARK	DIMENSIONS			WEIGHT (gm)	COLOR		OTHER IDENTIFYING MARKS	SHAPE FACTOR
	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)		CONCRETE	BEAD		
237	120	75	42	403.1	R		1 White Side	0.4443
238	105	90	32	179.2	R		1 White Side	0.2469
240	75	70	39	176.4	R		1 White Side	0.3590
241	91	41	20	55.5	R		1 White Side	0.3099
242	60	45	67	202.3	N			0.4660
243	70	50	34	99.7	N		1 White Side	0.3491
244	100	53	29	98.8	R			0.2678
245	80	55	17	58.6	R			0.3264
246	52	37	40	71.8	R			0.3887
247	130	104	32	498.5	N		1 White Side	0.4801
248	67	62	44	188.4	N		2 Flat Sides	0.4295
249	85	51	47	163.4	N		1 Flat Side	0.3342
250	80	67	35	139.4	R		1 White Side	0.3096
251	86	60	35	196.4	Y		1 Flat Side	0.4531
252	95	40	20	83.1	N		1 Flat Side	0.4556
253	77	65	38	142.7	Y	G	1 White Side	0.3126
254	85	50	40	219.7	Y			0.5385
255	90	86	36	231.1	R			0.3456
256	85	45	30	120.8	R		1 Flat Side	0.4386
257	90	55	23	130.0	R		1 Flat Side	0.4758
258	90	40	35	137.9	R		1 Flat Side	0.4560
259	67	45	31	93.2	Y			0.4155
260	61	43	34	88.0	R		1 Flat Side	0.4111
261	96	57	24	88.9	R	G	1 Flat Side	0.2821
262	95	45	21	110.7	R		1 Flat Side	0.5138
263	75	63	45	128.0	Y			0.2508
264	75	44	30	87.5	R		1 Flat Side	0.3683
265	100	55	20	86.9	R		1 White Side	0.3292

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
IDENTIFICATION

I.D. MARK	DIMENSIONS			WEIGHT (gm)	COLOR		OTHER IDENTIFYING MARKS	SHAPE FACTOR
	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)		CONCRETE	BEAD		
266	95	44	24	118.2	Y	Y		0.4909
267	65	60	40	212.7	Y			0.5681
269	95	70	51	386.2	Y			0.4745
270	100	68	50	498.6	N		1 Flat Side	0.6110
271	100	85	34	190.8	Y		1 White Side	0.2751
272	95	65	26	147.9	Y		1 White Side	0.3838
273	90	66	23	184.5	Y			0.5627
274	85	46	45	163.0	Y	Y	1 White Side	0.3860
275	85	71	26	181.0	N		1 Flat Side	0.4806
276	126	90	57	595.2	Y	G	1 Flat Side	0.3837
277	82	45	27	118.8	R	G	1 Flat Side	0.4968
278	87	30	43	107.4	R		1 White Side	0.3987
279	111	85	40	430.5	R		1 White Side	0.4753
280	150	55	31	182.3	Y	Y	1 White Side	0.2970
282	80	41	24	91.6	R		1 White Side	0.4848
283	74	45	31	105.6	R		1 White Side	0.4262
284	76	50	27	65.0	Y		1 Flat Side	0.2640
285	61	45	30	80.7	B		1 Flat Side	0.4083
286	70	45	37	159.4	Y			0.5699
287	106	45	35	178.1	N		1 Flat Side	0.4445
288	80	68	23	74.4	R			0.2478
289	85	54	50	287.0	N		2 Flat Sides	0.5211
290	90	50	82	360.1	N		2 Flat Sides	0.4066
292	85	72	51	435.0	N		1 Flat Side	0.5807
294	104	55	63	383.0	Y	G	1 Flat Side	0.4428
295	93	45	40	131.9	R		1 White Side	0.3283
296	62	47	51	105.3	N			0.2952
297	53	38	26	73.1	B/R		1 Flat Side	0.5817

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
IDENTIFICATION

I.D. MARK	DIMENSIONS			WEIGHT (gm)	COLOR		OTHER IDENTIFYING MARKS	SHAPE FACTOR
	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)		CONCRETE	BEAD		
298	75	50	51	245.6	Y		1 White Side	0.5351
299	105	68	74	609.5	Y		1 White Side	0.4807
300	120	80	71	755.4	Y		1 White Side	0.4618
301	95	65	42	275.4	Y		1 White Side	0.4425
302	85	45	35	124.4	Y		1 White Side	0.3872
303	77	56	38	142.6	R			0.3626
304	108	46	22	125.5	Y	Y	1 White Side	0.4784
305	146	47	76	449.1	Y	Y	1 White Side	0.3588
306	210	130	80	2372.3	Y	Y	1 White Side	0.4526
307	90	50	60	299.5	Y	Y	1 White Side	0.4622
308	200	90	73	1145.9	Y	Y	1 White Side	0.3634
309	86	46	40	191.0	Y	Y	1 White Side	0.5029
310	127	50	51	243.4	Y	Y	1 Flat Side	0.3132
311	280	85	80	2036.6	Y	Y/B	1 White Side	0.4457
312	93	50	47	281.5	Y		1 White Side	0.5367
313	97	47	43	220.5	Y		1 Flat Side	0.4687
314	80	63	35	152.8	Y		1 White Side	0.3609
315	87	62	50	231.8	R/B	G	1 White Side	0.3581
316	105	70	70	403.6	Y	Y	1 White Side	0.3269
317	59	45	66	298.8	Y	Y	1 White Side	0.7105
318	82	40	35	124.4	R		1 Flat Side	0.4515
319	68	40	56	156.2	R		1 Flat Side	0.4273
320	60	66	68	274.9	Y	Y	1 White Side	0.4254
321	120	74	72	450.4	Y	Y	1 White Side	0.2935
322	82	64	60	386.6	Y		1 White Side	0.5116
323	87	65	33	127.2	Y			0.2840
325	90	40	50	125.9	R			0.2914
326	115	73	55	651.4	Y	Y		0.5878

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
IDENTIFICATION

I.D. MARK	DIMENSIONS			WEIGHT (gm)	COLOR		OTHER IDENTIFYING MARKS	SHAPE FACTOR
	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)		CONCRETE	BEAD		
328	100	80	45	207.0	Y		1 White Side	0.2396
329	135	85	20	264.8	R		1 Flat Side	0.4808
330	91	72	26	181.6	R			0.4442
331	129	78	23	306.2	R		1 Flat Side	0.5513
332	135	80	65	741.9	R			0.4403
333	47	88	37	158.2	B	Y		0.4307
334	67	85	30	220.9	R			0.5387
335	145	130	55	1112.6	R	B		0.4472
336	71	48	40	129.8	R			0.3967
337	67	50	52	156.7	R			0.3748
338	75	50	26	98.2	R			0.4197
339	95	55	44	268.1	R			0.4859
340	92	66	45	272.4	R			0.4154
341	77	85	55	495.9	R	Y		0.5740
342	117	74	50	288.4	Y	R/B	1 White Side	0.2776
343	90	58	34	224.6	R			0.5273
344	160	115	90	1354.5	R			0.3408
345	113	65	37	154.6	R		1 Flat Side	0.2370
346	103	120	60	702.6	B			0.3948
347	110	50	47	183.8	Y		1 White Side	0.2963
348	100	68	31	205.0	R		1 Flat Side	0.4052
349	135	90	67	691.4	B	B		0.3539
350	130	50	50	297.6	R			0.3815
351	75	60	40	194.2	Y		1 Flat Side	0.4495
352	100	78	34	214.3	Y		1 White Side	0.3367
353	225	200	75	5669.9	Y		1 White Side/1 Flat	0.7000
354	97	77	17	120.2	R	R		0.3944
355	67	45	38	127.5	R/B	Y	1 Flat Side	0.4637

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
IDENTIFICATION

I.D. MARK	DIMENSIONS			WEIGHT (gm)	COLOR		OTHER IDENTIFYING MARKS	SHAPE FACTOR
	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)		CONCRETE	BEAD		
356	100	50	38	190.7	R/B			0.4182
357	90	50	40	148.2	B			0.3431
358	90	65	60	267.1	Y			0.3171
359	105	45	34	162.1	Y		1 White Side	0.4204
360	110	55	40	231.5	Y	B		0.3986
361	92	55	35	183.1	Y		1 Flat Side	0.4308
362	65	45	67	178.6	Y			0.3797
363	68	57	45	169.5	N			0.4049
364	95	80	46	230.1	N		2 Flat Sides	0.2742
365	94	62	33	174.5	N		1 Flat Side	0.3781
366	95	46	32	132.7	N		1 Flat Side	0.3954
367	68	50	45	141.2	N		1 Flat Side	0.3845
368	60	60	37	135.8	Y			0.4248
369	110	38	65	329.0	N			0.5045
370	165	90	50	584.8	Y			0.3282
371	75	80	65	428.6	N			0.4579
372	100	65	30	205.1	N			0.4382
373	70	95	35	217.9	N			0.3901
374	167	45	51	375.6	Y	R		0.4083
375	90	85	32	234.9	N			0.3998
376	57	40	40	120.9	N		1 Flat Side	0.5524
377	90	50	51	239.8	N			0.4354
378	85	36	57	165.4	N		1 Flat Side	0.3951
379	50	65	40	166.3	N			0.5330
380	75	60	50	197.6	N			0.3659
381	45	83	35	136.0	Y		1 White Side	0.4335
382	78	70	49	256.2	N			0.3990
383	70	57	40	153.7	N			0.4013

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
IDENTIFICATION

I.D. MARK	DIMENSIONS			WEIGHT (gm)	COLOR		OTHER IDENTIFYING MARKS	SHAPE FACTOR
	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)		CONCRETE	BEAD		
384	160	115	80	780.2	Y	Y	1 White Side	0.2208
385	146	65	60	422.2	Y	Y	1 White Side	0.3090
386	62	45	40	107.5	Y		1 White Side	0.4014
387	145	63	80	553.2	Y		1 White Side	0.3154
388	65	64	32	141.4	Y		1 White Side	0.4426
389	290	165	80	3942.7	Y		1 White Side	0.4292
390	115	50	32	186.7	Y		1 White Side	0.4228
391	168	76	76	1105.0	Y	Y	1 White Side	0.4745
392	100	112	61	984.5	Y		1 White Side	0.6004
393	140	70	75	689.4	Y	Y	1 White Side	0.3908
394	88	81	30	311.4	N			0.6068
395	80	58	60	327.1	Y	Y	1 White Side	0.4896
396	110	57	58	571.8	Y		1 White Side	0.6551
397	110	49	50	269.1	Y	B		0.4160
398	47	48	44	146.9	Y			0.6166
399	70	40	38	130.6	Y			0.5114
400	85	52	30	103.9	R			0.3255
401	130	44	69	357.3	Y	Y		0.3772
402	112	80	31	269.5	Y	G		0.4043
403	60	46	50	282.6	N		2 Flat Sides	0.8533
404	70	71	34	121.5	R/B		1 White Side	0.2996
405	75	57	43	168.9	R			0.3828
406	91	66	25	127.5	R		1 Black Side	0.3538
407	105	37	47	199.1	R/B	G	1 White Side	0.4543
408	55	64	35	129.0	R			0.4363
409	67	56	57	252.6	Y			0.4921
410	180	85	65	720.4	N		1 White Side	0.3018
411	130	60	44	270.5	R		1 White Side	0.3284

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
IDENTIFICATION

I.D. MARK	DIMENSIONS			WEIGHT (gm)	COLOR		OTHER IDENTIFYING MARKS	SHAPE FACTOR
	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)		CONCRETE	BEAD		
412	80	40	30	111.9	R		1 White Side	0.4857
413	105	68	45	224.5	N		2 Flat Sides	0.2911
414	105	72	30	232.5	Y		1 White Side	0.4271
415	73	69	45	319.1	Y	G		0.5866
416	74	55	48	198.8	Y		1 White Side	0.4240
417	69	38	40	69.2	Y		2 White Sides	0.2749
418	147	73	50	604.9	Y	R	1 Flat Side	0.4697
419	95	68	64	254.0	Y	G		0.2560
420	70	41	55	145.1	G			0.3830
421	60	65	39	160.2	Y		1 White Side	0.4389
422	96	60	44	273.9	Y			0.4503
423	77	65	50	324.1	N		2 Flat Sides	0.5396
424	100	71	54	394.1	B/R		1 White Side	0.4283
425	90	60	36	139.4	Y			0.2988
426	61	55	40	139.1	B/R		1 White Side	0.4319
427	72	46	51	241.0	R/B		1 White Side	0.5945
428	57	40	52	112.8	Y		1 White Side	0.3964
429	68	55	23	83.7	Y		1 White Side	0.4054
430	70	54	35	134.4	R			0.4233
431	65	30	23	44.5	N		1 White Side	0.4134
432	57	36	44	109.9	Y	Y		0.5072
433	90	43	37	96.3	Y		1 White Side	0.2802
434	54	33	35	59.7	Y			0.3988
435	50	25	28	41.4	Y			0.4929
436	51	40	28	43.2	Y	Y		0.3151
437	50	38	26	52.0	Y			0.4386
438	50	30	39	56.7	Y		1 White Side	0.4038
439	35	27	27	44.3	Y			0.7234

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
IDENTIFICATION

I.D. MARK	DIMENSIONS			WEIGHT (gm)	COLOR		OTHER IDENTIFYING MARKS	SHAPE FACTOR
	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)		CONCRETE	BEAD		
440	25	40	40	29.0	Y	Y	1 Flat Side	0.3021
441	75	50	45	215.1	Y	Y		0.5311
442	60	30	22	48.7	R			0.5124
443	55	40	18	32.4	R			0.3409
444	40	50	20	35.5	Y		1 Flat Side 1 White Side	0.3698
445	70	44	19	69.5	R			0.4948
446	65	38	26	65.8	R			0.4269
447	54	33	24	52.0	R			0.5066
448	52	45	29	58.6	B		1 Flat Side 1 White Side	0.3598
449	40	65	54	137.2	Y			0.4072
450	50	58	27	60.5	R			0.3219
451	56	40	40	89.6	N			0.4167
452	48	50	21	62.1	R	Y	1 Flat Side	0.5134
453	58	35	20	49.5	R			0.5080
454	40	41	56	99.5	N			0.4514
455	45	56	27	46.7	R			0.2860
456	48	50	20	44.6	R		1 White Side	0.3872
457	75	34	20	66.5	R			0.5433
458	65	54	25	75.1	R			0.3566
459	40	55	47	78.2	R			0.3151
460	80	43	27	92.7	R		1 White Side 1 White Side 1 White Side	0.4159
461	70	49	31	99.3	B			0.3891
462	60	50	31	104.3	R			0.4673
463	38	58	32	102.4	R			0.6050
464	56	89	36	212.9	Y	G	1 White Side	0.4944
465	80	60	40	185.4	N			0.4023
466	56	71	30	89.6	R			0.3130
468	80	38	54	180.9	N			0.4592

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
IDENTIFICATION

I.D. MARK	DIMENSIONS			WEIGHT (gm)	COLOR		OTHER IDENTIFYING MARKS	SHAPE FACTOR
	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)		CONCRETE	BEAD		
469	77	43	52	159.8	Y		1 White Side	0.3867
470	59	63	39	143.7	R		1 Flat Side	0.4130
471	106	91	48	434.8	Y	Y	1 Flat Side	0.3913
472	65	55	35	117.7	Y			0.3919
473	50	41	31	59.4	Y			0.3895
474	225	140	80	4490.6	Y	Y	1 White Side	0.7425
475	45	40	61	116.9	R/B			0.4436
476	85	56	18	70.4	N		1 Flat Side	0.3424
477	75	66	38	143.2	N		1 Flat Side	0.3172
478	71	30	30	86.1	N		1 Flat Side	0.5614
479	54	46	43	131.7	N			0.5138
480	70	54	29	100.1	N			0.3805
481	87	40	32	96.0	N		1 Flat Side	0.3592
482	46	80	34	109.8	N			0.3656
483	53	40	39	117.9	N			0.5942
484	68	37	58	155.2	Y		1 White Side	0.4431
485	95	41	27	108.0	N		1 Flat Side	0.4279
486	55	47	60	162.6	N			0.4368
487	56	70	37	139.5	N			0.4008
488	62	45	30	113.9	N		1 Flat Side	0.5670
489	65	40	45	103.9	N			0.3700
490	75	40	45	90.0	N			0.2778
491	86	55	60	207.7	Y			0.3049
492	93	40	33	143.7	N/Y	R	1 Flat Side	0.4877
493	38	64	40	115.0	N			0.4926
494	71	50	35	134.9	N			0.4524
495	103	45	40	167.1	N		1 Flat Side	0.3755
496	100	60	53	197.3	N		1 Flat Side	0.2585

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
IDENTIFICATION

I.D. MARK	DIMENSIONS			WEIGHT (gm)	COLOR		OTHER IDENTIFYING MARKS	SHAPE FACTOR
	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)		CONCRETE	BEAD		
497	80	60	38	125.5	N		1 Flat Side	0.2867
498	70	50	45	128.6	N		1 Flat Side	0.3402
499	70	40	30	116.7	N		1 Flat Side	0.5789
500	70	54	42	161.7	Y		1 White Side	0.4244
501	60	50	31	140.1	N		1 Flat Side	0.6277
502	113	68	39	251.7	N		1 Flat Side	0.3500
503	71	60	40	151.1	N		1 Flat Side	0.3695
504	105	53	59	367.5	N		1 Flat Side	0.4664
505	66	65	47	338.6	N		1 Flat Side	0.6997
506	90	60	19	90.1	Y		1 Flat Side	0.3659
507	90	39	37	128.8	N		1 Flat Side	0.4132
508	125	62	70	392.8	Y		1 Flat Side	0.3017
509	55	75	30	139.6	N		1 Flat Side	0.4700
510	60	45	27	70.1	N		1 Flat Side	0.4007
511	95	45	35	139.1	N		1 Flat Side	0.3874
512	75	50	51	231.0	N		1 Flat Side	0.5033
513	83	38	32	122.8	N		1 Flat Side	0.5070
514	68	50	38	127.1	N		1 Flat Side	0.4099
515	57	56	36	150.5	N		1 Flat Side	0.5457
516	65	38	25	81.1	N		1 Flat Side	0.5472
517	107	48	44	230.5	N		1 Flat Side	0.4250
518	80	61	25	137.7	N		1 Flat Side	0.4703
519	126	100	54	826.6	N		1 Flat Side	0.5062
520	87	43	50	200.7	N		1 Flat Side	0.4471
521	114	85	60	695.1	N		1 Flat Side	0.4982
522	75	60	52	275.8	N		1 Flat Side	0.4911
523	56	60	40	160.4	N		1 Flat Side	0.4973
524	77	56	60	198.6	N		1 Flat Side	0.3198

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
IDENTIFICATION

I.D. MARK	DIMENSIONS			WEIGHT (gm)	COLOR		OTHER IDENTIFYING MARKS	SHAPE FACTOR
	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)		CONCRETE	BEAD		
525	100	91	45	370.6	N		1 Flat Side	0.3771
526	103	80	50	317.5	N			0.3211
527	86	79	55	356.8	Y			0.3979
528	116	48	32	181.2	N		1 Flat Side	0.4237
529	84	57	45	181.6	N		1 Flat Side	0.3512
530	100	65	34	173.6	N			0.3273
531	89	34	25	178.3	N		1 Flat Side	0.9820
532	135	77	52	413.4	N		1 Flat Side	0.3187
533	103	30	50	127.0	Y	Y	1 Flat White Side	0.3425
534	225	130	80	3020.9	Y		1 White Side	0.5379
535	100	42	30	154.3	N		1 Flat Side	0.5103
536	110	45	90	298.8	N/Y	R	1 Flat White Side	0.2795
537	87	40	55	224.3	N		1 Flat Side	0.4883
538	75	40	35	143.5	N		1 Flat Side	0.5694
539	75	56	28	112.0	N			0.3968
540	64	55	42	111.0	N			0.3128
541	114	95	35	339.3	N		1 Flat Side	0.3730
542	82	55	50	307.7	N		1 Flat Side	0.5686
543	90	80	70	534.3	N			0.4417
544	114	60	34	319.4	N		1 Flat Side	0.5723
545	105	75	43	215.5	N			0.2652
546	115	80	52	293.4	N		1 Flat Side	0.2555
547	65	60	40	127.4	N			0.3403
548	52	53	40	126.6	Y			0.4785
549	63	50	35	106.2	N		1 Flat Side	0.4014
550	91	55	25	101.0	N			0.3363
551	50	60	55	117.4	N			0.2965
552	90	57	20	78.0	N			0.3168

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
IDENTIFICATION

I.D. MARK	DIMENSIONS			WEIGHT (gm)	COLOR		OTHER IDENTIFYING MARKS	SHAPE FACTOR
	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)		CONCRETE	BEAD		
553	85	70	30	184.2	N			0.4300
554	94	63	40	158.8	N		1 Flat Side	0.2793
555	65	32	40	79.8	N			0.3996
556	63	40	43	142.9	N		1 Flat Side	0.5495
557	70	45	60	171.9	N			0.3790
558	116	65	65	316.3	Y			0.2689
559	77	55	21	62.7	N			0.2938
560	109	65	58	517.1	Y			0.5243
561	76	47	30	72.2	Y			0.2809
562	102	60	49	324.2	N		1 Flat Side	0.4505
563	105	65	35	161.3	N			0.2814
564	90	98	67	798.1	Y		1 White Side	0.5627
565	185	75	57	619.0	Y		1 White Side	0.3261
566	80	64	49	153.4	N			0.2548
567	78	65	30	154.5	Y		1 Flat Side	0.4232
568	60	40	38	117.4	N		1 Flat Side	0.5364
569	75	65	35	137.4	N			0.3355
570	100	57	38	230.9	N		1 Flat Side	0.4442
571	80	60	40	185.8	N			0.4032
572	65	55	45	131.7	N			0.3411
573	87	50	27	113.7	N		1 Flat Side	0.4034
574	75	50	34	123.1	Y	R		0.4023
575	110	90	80	793.8	N			0.4176
576	89	60	43	226.0	N		1 Flat Side	0.4101
577	67	50	23	99.1	N		1 Flat Side	0.5359
578	92	70	50	275.8	N		1 Flat Side	0.3569
579	80	59	62	321.2	N			0.4573
580	135	105	82	1723.2	N		1 Flat Side	0.6177

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
IDENTIFICATION

I.D. MARK	DIMENSIONS			WEIGHT (gm)	COLOR		OTHER IDENTIFYING MARKS	SHAPE FACTOR
	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)		CONCRETE	BEAD		
581	96	75	40	229.2	N			0.3316
582	195	135	105	4525.7	Y	R	1 White Side	0.6822
583	95	80	39	215.0	Y	R		0.3022
584	135	140	70	1188.5	N		1 Flat Side	0.3743
585	95	90	75	693.0	N			0.4503
586	125	63	82	1124.2	Y	R	1 White Side	0.7254
587	105	45	50	467.1	Y	R	1 White Side	0.8238
588	166	80	43	388.2	Y		1 White Side	0.2833
589	102	45	40	209.1	Y		1 White Side	0.4745
590	285	200	105	6137.4	Y		1 White Side	0.4273
591	110	80	50	404.7	N		1 Flat Side	0.3832
592	85	83	87	650.0	N		1 Flat Side	0.4413
593	182	43	59	376.1	Y		1 White Side	0.3394
594	220	180	85	5311.1	Y	R	1 White Side	0.6574
595	100	80	75	700.6	N		2 Flat Sides	0.4865
596	63	65	50	265.0	N			0.5393
597	65	50	35	121.0	Y			0.4432
598	78	52	45	168.7	N		1 Flat Side	0.3851
599	330	140	95	4408.9	N			0.4186
600	90	40	24	52.3	N		1 Flat Side	0.2520
601	95	100	50	518.5	N			0.4548
602	80	45	25	103.1	N		1 Flat Side	0.4773
603	53	50	19	66.4	N			0.5495
604	52	58	30	78.9	Y			0.3633
605	73	55	25	88.0	N			0.3653
606	60	50	40	106.6	N			0.3701
610	82	53	35	202.5	Y	Y		0.5547
611	121	45	31	139.6	N		1 Flat Side	0.3446

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
IDENTIFICATION

I.D. MARK	DIMENSIONS			WEIGHT (gm)	COLOR		OTHER IDENTIFYING MARKS	SHAPE FACTOR
	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)		CONCRETE	BEAD		
612	83	54	30	120.7	N			0.3741
613	63	45	45	119.1	Y			0.3890
614	60	43	26	103.1	N			0.6404
615	60	42	42	81.0	N		1 Flat Side	0.3189
616	50	57	40	99.6	Y			0.3640
617	80	47	37	113.9	N			0.3411
618	65	78	34	165.0	Y	R	1 White Side	0.3988
619	59	39	26	71.9	N		1 Flat Side	0.5008
620	70	50	27	70.6	N			0.3113
621	60	64	35	113.7	N			0.3525
622	57	40	29	89.8	N			0.5659
623	50	39	30	74.1	N/B		2 Flat Sides	0.5278
624	45	40	29	73.6	N/B			0.5875
625	85	80	47	340.6	N			0.4440
626	62	35	38	101.5	N			0.5129
627	95	55	37	193.3	B/R	R		0.4166
628	115	48	43	190.1	Y			0.3337
629	130	50	57	414.0	Y		1 White Side	0.4656
630	65	43	26	69.0	Y		1 White Side	0.3956
631	105	65	36	145.5	Y	R	1 White Side	0.2467
632	80	55	61	319.9	N			0.4966
633	70	105	54	326.2	N		1 Flat Side	0.3424
634	74	40	39	129.9	Y		1 Flat Side	0.4689
635	65	50	36	144.1	Y	R	1 White Side	0.5132
636	62	45	60	190.3	N			0.4737
637	50	45	41	97.2	N			0.4390
638	160	125	66	1153.7	N			0.3642
639	100	60	55	451.1	N		1 Flat Side	0.5696

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
IDENTIFICATION

I.D. MARK	DIMENSIONS			WEIGHT (gm)	COLOR		OTHER IDENTIFYING MARKS	SHAPE FACTOR
	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)		CONCRETE	BEAD		
640	72	55	26	88.8	N			0.3594
641	55	50	30	76.8	N			0.3879
642	75	68	15	89.9	Y		1 White Side	0.4897
643	75	45	40	171.5	R		1 White Side	0.5293
644	49	26	31	50.4	R			0.5317
645	95	70	45	281.1	R		1 White Side	0.3914
646	73	33	40	139.4	Y		1 White Side	0.6028

2.4 SORTED BY WEIGHT

The weight and location information of each piece of PAS-3 debris collected in the circular collection area was first combined into a single database. The database was then sorted by weight from lightest to heaviest.

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY WEIGHT

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
440	29.0	-3232	15668	18614	57.32
443	32.4	-2677	9694	13569	45.59
444	35.5	-2231	9104	12836	45.18
435	41.4	-1394	16189	18152	63.10
436	43.2	-278	17324	18721	67.73
439	44.3	-1379	19204	20881	66.88
431	44.5	-38939	20350	50078	23.98
456	44.6	-11752	2460	18732	7.55
214	45.2	-25445	-765	32272	358.64
455	46.7	-10620	1704	17540	5.57
442	48.7	-2353	11485	14698	51.39
453	49.5	-7749	2340	14754	9.13
644	50.4	-133352	36057	144734	14.43
16	51.0	49616	-129429	136321	251.70
437	52.0	130	18429	19605	70.05
447	52.0	-6771	5442	14639	21.83
600	52.3	160228	535	153411	179.80
241	55.5	-15559	-12510	25637	330.79
438	56.7	1393	18406	19189	73.58
224	57.5	-22956	-1912	29836	356.33
245	58.6	-15743	-10550	24906	334.94
448	58.6	-7414	2571	14462	10.24
473	59.4	1127	11095	12469	62.85
434	59.7	-3187	20337	22665	63.80
202	60.5	-16498	-22414	32342	316.13
450	60.5	-6357	3153	13547	13.46
225	61.0	-21378	-3446	28406	353.03
452	62.1	-7145	3327	14354	13.40
559	62.7	43564	-4817	37060	187.47
216	62.8	-26538	5936	33881	10.09
189	63.9	-54532	-35415	70838	330.00
212	64.2	-22492	-5192	29766	349.95
206	64.6	-21040	-13468	30943	334.20
284	65.0	-7074	-2897	14191	348.22
446	65.8	-6573	5762	14578	23.28
603	66.4	138672	-18348	133124	187.92
221	66.5	-20458	351	27278	0.74
457	66.5	-10263	-376	17085	358.74
3	67.3	-111077	82334	143799	34.93
630	69.0	76582	-56624	89851	219.06
417	69.2	-66760	6017	73823	4.67

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY WEIGHT

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
445	69.5	-3998	5691	12222	27.75
510	70.1	36087	11211	31342	159.04
25	70.3	18288	5428	12690	154.67
476	70.4	16712	8257	12887	140.15
620	70.6	29945	7391	24279	162.28
246	71.8	-12715	-13150	23547	326.05
619	71.9	29286	5500	23131	166.25
561	72.2	44152	-3040	37458	184.66
297	73.1	-6543	-19882	23955	303.90
624	73.6	149046	50534	150938	160.44
623	74.1	148165	49925	149905	160.55
288	74.4	-5996	-2740	13104	347.93
458	75.1	-10413	-403	17236	358.66
233	75.5	-8679	-24191	28729	302.64
641	76.8	78019	5752	71433	175.38
213	77.8	-25714	-2797	32652	355.09
552	78.0	32229	1875	25481	175.78
459	78.2	-9490	-763	16326	357.32
4	78.6	-98801	80882	133031	37.44
604	78.9	119183	-25756	11521	192.91
24	79.2	18804	4938	12964	157.61
555	79.8	25701	3485	19202	169.54
285	80.7	-6836	-2730	13925	348.69
9	80.8	-73463	-20014	82739	346.00
615	81.0	33052	451	26238	179.01
516	81.1	44468	-69	37650	180.10
185	81.5	-45790	-18066	55624	341.05
211	82.6	-21386	-8285	29395	343.63
252	83.1	-14786	1600	21663	4.23
429	83.7	-67991	11561	75697	8.78
197	84.0	-27739	-5845	35048	350.40
478	86.1	21065	827	14271	176.68
265	86.9	-4785	5229	12727	24.26
264	87.5	-8329	3643	15579	13.53
260	88.0	-11401	-59	18219	359.82
605	88.0	115988	-26062	112238	193.43
181	88.6	-42267	20	49085	0.02
640	88.8	98124	-20639	93609	192.74
261	88.9	-10706	2731	17735	8.86
451	89.6	-7022	3501	14276	14.19
466	89.6	-3135	-3415	10522	341.06

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY WEIGHT

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
622	89.8	112002	7404	105444	175.97
642	89.9	-78326	32074	90985	20.64
490	90.0	30931	-3510	24367	188.28
506	90.1	37159	9030	31657	163.43
217	90.3	-26031	10858	34597	18.29
282	91.6	-9275	-4532	16719	344.27
199	92.4	-37671	-8990	45388	348.58
460	92.7	-6393	-934	13244	355.96
259	93.2	-11777	-821	18613	357.47
481	96.0	24215	404	17401	178.67
17	96.1	51817	-98572	108358	245.46
433	96.3	-2390	20698	22654	66.02
637	97.2	113372	-9088	106941	184.87
201	97.9	-35025	-16597	45014	338.36
338	98.2	6388	-9052	9062	272.72
170	98.6	-3994	21275	23865	63.06
244	98.8	-14846	-7825	23034	340.14
219	99.1	-23713	16694	34797	28.67
577	99.1	66292	-4249	59625	184.09
461	99.3	-6669	-1116	13533	355.27
454	99.5	-10041	1607	16935	5.45
616	99.6	31283	-291	24467	180.68
243	99.7	-16735	-7581	24743	342.16
480	100.1	22899	1670	16167	174.07
550	101.0	33625	2186	26896	175.34
626	101.5	175527	6283	168826	177.87
236	101.8	-9613	-18471	24722	311.66
23	102.4	18484	4386	12464	159.39
463	102.4	-4613	-2311	11662	348.57
234	102.8	-8508	-21452	26364	305.54
602	103.1	145780	-14788	139746	186.07
614	103.1	34369	859	27564	178.21
400	103.9	-4139	1654	11081	8.58
489	103.9	31306	-6294	25284	194.41
462	104.3	-5545	-532	12375	357.54
220	104.9	-21390	1257	28236	2.55
296	105.3	-6122	-15745	20380	309.41
235	105.5	-6663	-25237	28612	298.11
283	105.6	-8606	-4332	16021	344.31
226	106.0	-19014	-5989	26517	346.95
549	106.2	34663	2241	27935	175.40

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY WEIGHT

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
606	106.6	112234	-28782	109275	195.27
175	107.3	-20478	3441	27512	7.18
278	107.4	-8545	-5783	16415	339.37
386	107.5	207	24579	25452	74.95
196	108.0	-28502	-10187	36760	343.91
485	108.0	24346	5897	18494	161.40
193	108.6	-24719	-18571	36599	329.51
32	108.8	18154	6947	13295	148.50
218	108.8	-32427	9761	40440	13.97
209	109.6	-19311	-9005	27637	340.98
482	109.8	23594	984	16805	176.64
432	109.9	-2827	17753	20204	61.49
33	110.5	18815	2961	12357	166.13
262	110.7	-10559	2467	17551	8.08
540	111.0	53061	-4802	46492	185.93
412	111.9	-6957	-7798	15829	330.48
539	112.0	53800	2112	47030	177.43
207	112.5	-21810	-8596	29891	343.29
428	112.8	-52538	35008	68911	30.53
573	113.7	61174	-2741	54425	182.89
621	113.7	37639	1095	30841	177.97
488	113.9	32449	-6821	26523	194.90
617	113.9	27520	236	20703	179.35
493	115.0	34385	-1347	27600	182.80
215	115.2	-24301	2646	31231	4.86
499	116.7	37950	2074	31201	176.19
176	116.8	-21168	773	27997	1.58
475	116.9	14438	753	10716	135.32
551	117.4	33104	1958	26359	175.74
568	117.4	48702	1525	41912	177.91
472	117.7	-1976	7001	11241	38.52
483	117.9	24303	-302	17488	180.99
266	118.2	-5726	4218	13235	18.59
174	118.5	-19923	5097	27223	10.79
205	118.7	-18495	-14902	29373	329.51
277	118.8	-10682	-7300	18962	337.36
15	119.0	-184455	-61291	200853	342.23
613	119.1	33289	-1375	26506	182.97
354	120.2	6280	-26483	26488	271.16
612	120.7	29007	10028	24350	155.68
256	120.8	-13017	1434	19886	4.14

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY WEIGHT

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
376	120.9	33222	1046	26425	177.73
597	121.0	121940	-1483	115131	180.74
404	121.5	-6979	-845	13823	356.49
513	122.8	44036	3269	37361	174.98
574	123.1	61169	-1239	54365	181.31
230	124.4	-16144	-15778	27860	325.51
302	124.4	-457	-22852	23982	287.66
318	124.4	1548	-24867	25419	281.97
223	124.7	-22666	-1967	29550	356.18
179	125.5	-41082	-6563	48347	352.20
304	125.5	-24	-23399	24379	286.30
497	125.5	35398	4341	28908	171.36
325	125.9	4315	-21375	21521	276.68
548	126.6	37243	1352	30455	177.45
533	127.0	46776	5861	40385	171.66
514	127.1	44266	1812	37491	177.23
323	127.2	3247	-23377	23649	278.68
547	127.4	60540	-9411	54540	189.94
355	127.5	6178	-26764	26772	271.37
406	127.5	-9587	-1765	16500	353.86
263	128.0	-10319	2571	17329	8.53
498	128.6	36242	2177	29505	175.77
507	128.8	38497	9321	33022	163.60
408	129.0	-10266	-3641	17467	347.97
336	129.8	3808	-9586	10047	287.43
634	129.9	77741	-16092	72725	192.78
257	130.0	-14165	-251	20984	359.31
399	130.6	-6441	1381	13331	5.94
171	130.7	-15734	30242	37725	53.29
479	131.7	21353	56	14535	179.78
572	131.7	55112	-8799	49089	190.33
182	131.8	-41535	-10056	49388	348.25
152	131.9	-26952	221	33771	0.38
295	131.9	-7026	-7260	15632	332.33
366	132.7	25718	-3222	19172	189.67
151	133.7	-30656	-2458	37554	356.25
430	134.4	-33001	26378	47763	33.52
494	134.9	34991	595	28179	178.79
198	135.8	-32708	-8133	40354	348.37
368	135.8	23329	-3258	16830	191.16
381	136.0	25003	2873	18410	171.02

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY WEIGHT

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
449	137.2	-5607	3288	12853	14.82
569	137.4	49361	-5142	42853	186.89
518	137.7	45448	-4727	38918	186.98
258	137.9	-14500	-1448	21367	356.11
426	139.1	-79254	46143	97660	28.20
511	139.1	42087	2376	35349	176.15
250	139.4	-15146	-230	21965	359.40
425	139.4	-95569	47411	112831	24.85
646	139.4	-157246	38657	168557	13.26
487	139.5	31606	-4897	25267	191.18
509	139.6	43781	8253	37873	167.41
611	139.6	31318	5805	25178	166.67
501	140.1	38239	1397	31452	177.45
22	140.3	17717	4647	11848	156.91
367	141.2	24725	-2864	18134	189.09
210	141.4	-20336	-8478	28447	342.66
388	141.4	-2694	22744	24653	67.30
12	141.9	-132974	-106186	175549	322.78
303	142.6	118	-22978	23934	286.26
253	142.7	-15230	3801	22373	9.78
556	142.9	31495	-1017	24698	182.36
477	143.2	20686	801	13892	176.69
538	143.5	53763	4266	47138	174.81
470	143.7	-4066	-380	10891	358.00
492	143.7	34402	-1505	27625	183.12
635	144.1	80409	-16088	75329	192.33
420	145.1	-61871	-14311	70164	348.23
631	145.5	60159	-45067	69831	220.19
398	146.9	-6559	1523	13463	6.50
272	147.9	-7115	-17891	22676	307.91
357	148.2	12958	-11858	13354	242.63
515	150.5	44712	-629	37899	180.95
112	150.7	37597	-36695	47894	230.01
503	151.1	40778	3558	34146	174.02
314	152.8	2594	-25151	25503	279.53
187	153.1	-58292	-26688	70367	337.71
566	153.4	47470	4159	40864	174.16
383	153.7	22126	1515	15383	174.35
535	154.3	53425	6756	47095	171.75
567	154.5	48585	2184	41824	177.01
345	154.6	7405	-11425	11440	267.06

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY WEIGHT

I.D. MARK	WEIGHT (gm.)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
484	155.2	27565	-2902	20949	187.96
165	155.5	-5489	5772	13594	25.13
319	156.2	3099	-26004	26269	278.14
337	156.7	5875	-9656	9702	275.58
333	158.2	5045	-12703	12827	277.94
554	158.8	26874	1051	20083	177.00
286	159.4	-6148	-3052	13320	346.76
469	159.8	-3118	-2007	10137	348.58
421	160.2	-56027	15545	64739	13.89
523	160.4	40253	355	33437	179.39
563	161.3	43074	2553	36346	175.97
500	161.7	38898	1906	32137	176.60
359	162.1	10170	-9732	10293	250.99
486	162.6	28335	-4411	21965	191.58
222	162.7	-22841	-519	29663	359.00
274	163.0	-7049	-11689	18136	319.87
26	163.1	21273	4275	15074	163.53
249	163.4	-14505	-1491	21375	356.00
13	164.9	-140974	-120698	190815	320.76
618	165.0	27923	3601	21410	170.32
378	165.4	24848	306	18033	179.03
379	166.3	23019	1508	16271	174.68
495	167.1	36740	1952	29985	176.27
598	168.7	144747	5683	138046	177.64
405	168.9	-9091	-2206	16062	352.10
363	169.5	19828	-15723	20408	230.39
150	169.7	-32562	-2606	39467	356.21
643	171.5	-112803	31480	123694	14.74
228	171.8	-16594	-11215	25959	334.40
557	171.9	31877	-1220	25088	182.79
115	172.7	46041	-45954	60417	229.52
14	173.3	-187268	-60409	203270	342.71
530	173.6	51655	4862	45100	173.81
204	173.8	-19520	-15528	30575	329.48
365	174.5	20566	-2104	13908	188.70
67	174.6	34932	-5732	28692	191.52
99	175.3	26982	1294	20206	176.33
240	176.4	-14440	-16316	26797	322.49
113	176.7	39135	-38927	50593	230.30
287	178.1	-5799	-2675	12897	348.03
531	178.3	52207	5443	45714	173.16

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY WEIGHT

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
362	178.6	14124	-12992	14905	240.65
238	179.2	-13384	-17268	26577	319.48
155	180.6	-18114	1103	24956	2.53
468	180.9	-3407	-2861	10618	344.37
275	181.0	-8036	-10752	18337	324.10
10	181.1	-113970	-38244	126697	342.43
528	181.2	55043	1346	48244	178.40
330	181.6	2994	-13173	13717	286.19
529	181.6	54944	1391	48146	178.34
102	182.3	22210	-3707	15832	193.54
280	182.3	-7374	-5525	15230	338.73
361	183.1	15224	-12043	14686	235.09
347	183.8	6144	-10634	10655	273.63
553	184.2	30282	1748	23529	175.74
273	184.5	-7485	-11611	18423	320.93
465	185.4	-3290	-3794	10797	339.43
571	185.8	51104	-7596	44933	189.73
390	186.7	-153	23357	24376	73.38
200	188.4	-38160	-15487	47570	341.00
248	188.4	-13822	-4198	21062	348.50
78	189.6	50479	-20494	48232	205.15
628	190.1	96446	-72362	115194	218.92
636	190.3	91919	-5827	85300	183.92
356	190.7	6029	-24496	24508	271.85
271	190.8	-7559	-18547	23467	307.78
309	191.0	-1290	-30302	31368	284.98
183	191.8	-45952	-13318	54424	345.84
6	192.2	-126575	29731	136666	12.57
104	192.7	28117	-7253	22500	198.80
627	193.3	123347	-61335	131685	207.76
351	194.2	9161	-12689	12903	259.54
5	195.9	-128325	44547	142296	18.24
251	196.4	-15127	1316	21984	3.43
496	197.3	35104	4027	28572	171.90
380	197.6	23442	2625	16830	171.03
184	197.9	-45805	-18053	55634	341.07
194	198.2	-23489	-18142	35322	329.10
524	198.6	41269	1764	34496	177.07
416	198.8	-18619	4160	25775	9.29
407	199.1	-10490	-4024	17770	346.91
19	199.7	57974	-70039	86731	233.86

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY WEIGHT

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
98	200.1	33024	3871	26490	171.60
520	200.7	38782	-1419	31995	182.54
242	202.3	-17433	-5251	24813	347.78
610	202.5	26780	23478	30817	130.37
348	205.0	8459	-10805	10928	261.37
372	205.1	34427	799	27621	178.34
11	206.0	-136402	-94728	171713	326.52
328	207.0	4334	-21714	21856	276.53
491	207.7	35460	-5348	29137	190.58
31	208.4	18773	2721	12261	167.18
589	209.1	89979	12699	84125	171.32
164	211.4	-6341	6075	14494	24.78
267	212.7	-4403	5949	12701	27.93
464	212.9	-4386	-4543	12090	337.93
352	214.3	8789	-12745	12897	261.21
583	215.0	62652	14555	57700	165.39
441	215.1	-2676	13428	16445	54.74
545	215.5	58820	-10171	52987	191.07
120	216.9	85515	-52611	94663	213.76
126	217.2	10660	-22178	22508	260.17
373	217.9	31830	2682	25156	173.88
2	219.6	-123266	100058	164114	37.57
254	219.7	-15377	3698	22501	9.46
313	220.5	3764	-36494	36621	274.78
334	220.9	4627	-12216	12411	280.17
537	224.3	53210	4206	46582	174.82
413	224.5	-5380	-7642	14394	327.93
343	224.6	7004	-11092	11093	269.04
208	225.0	-19408	-11729	28729	335.90
69	225.6	39317	-6152	33077	190.72
576	226.0	66516	-7224	60134	186.90
581	229.2	62924	2690	56170	177.25
364	230.1	20028	-4262	13880	197.88
517	230.5	46524	-1893	39751	182.73
570	230.9	50405	-8390	44387	190.89
512	231.0	43363	3281	36692	174.87
116	231.1	52530	-46784	65409	225.66
255	231.1	-13982	5347	21476	14.42
360	231.5	14025	-8441	11099	222.51
315	231.8	384	-26906	27664	283.45
41	232.5	-2832	-5986	11356	328.19

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY WEIGHT

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
375	234.9	33504	1129	26710	177.58
377	239.8	25085	955	18291	177.01
427	241.0	-76245	52535	98283	32.31
80	243.1	37509	-12423	33110	202.04
310	243.4	-1328	-34094	35054	283.44
298	245.6	-3041	-20873	23084	295.28
21	251.5	18188	4510	12231	158.36
88	251.6	23658	-2983	17102	190.04
502	251.7	41152	3567	34519	174.07
409	252.6	-11450	-3495	18599	349.17
419	254.0	-84781	10143	92159	6.32
70	255.6	39808	-6469	33619	191.09
382	256.2	27110	3746	20635	169.54
65	260.2	33733	-400	26918	180.85
186	261.5	-41156	-18901	51563	338.50
227	264.7	-17720	-7442	25642	343.13
329	264.8	2884	-13430	13994	286.32
596	265.0	123853	-9790	117444	184.78
358	267.1	10027	-9685	10203	251.67
339	268.1	6578	-8351	8355	271.64
397	269.1	9086	54596	54643	92.38
402	269.5	-2801	810	9653	4.81
411	270.5	-6884	-7517	15629	331.25
73	272.1	50558	-6152	44171	188.01
340	272.4	6257	-7813	7833	274.11
422	273.9	-73531	20466	82915	14.29
192	274.2	-28210	-31255	46945	318.26
320	274.9	2882	-23092	23425	279.67
301	275.4	-584	-23071	24230	287.79
522	275.8	39059	-1825	32293	183.24
578	275.8	70423	-1443	63621	181.30
231	278.5	-12802	-19787	27866	314.76
645	281.1	-147539	35648	158420	13.00
312	281.5	3081	-32908	33119	276.48
403	282.6	-4991	-713	11830	356.54
30	283.4	21023	2684	14456	169.30
289	287.0	-5310	-5361	13260	336.15
342	288.4	7346	-11454	11466	267.36
203	289.3	-17095	-19729	31001	320.48
169	290.4	-5894	23152	26413	61.23
105	290.7	37411	-4287	30892	187.98

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY WEIGHT

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
546	293.4	58775	-10065	52923	190.96
350	297.6	9415	-10718	11028	256.38
136	297.7	-16077	-4839	23401	348.07
190	297.9	-53241	-40112	72222	326.26
317	298.8	1584	-23235	23817	282.69
536	298.8	56670	9495	50748	169.22
307	299.5	-2786	-26880	28544	289.66
146	306.2	-27633	-7336	35224	347.98
331	306.2	3341	-13343	13789	284.61
542	307.7	62675	-7754	56393	187.90
394	311.4	5783	14852	14888	86.01
82	314.2	31738	-7909	26145	197.61
29	315.1	21202	3423	14785	166.61
558	316.3	42884	-5569	36493	188.78
526	317.5	52701	-3536	46019	184.41
415	319.1	-3166	-5244	11277	332.29
110	319.2	37838	-16625	35194	208.19
544	319.4	58988	-10113	53141	190.97
632	319.9	55661	-25656	55171	207.71
579	321.2	71524	-683	64710	180.60
172	322.6	-18927	13604	29118	27.85
145	323.4	-28632	-874	35460	358.59
423	324.1	-70847	15724	79241	11.45
562	324.2	44469	-3109	37779	184.72
633	326.2	64662	-12076	59092	191.79
395	327.1	-268	29852	30681	76.65
369	329.0	27337	-3878	20882	190.70
505	338.6	38632	6623	32496	168.24
541	339.3	59860	-307	53043	180.33
177	340.0	-40767	-4831	47830	354.20
625	340.6	162663	47263	162854	163.13
107	353.3	40156	-4451	33634	187.61
97	353.9	35171	2334	28449	175.29
131	354.0	-10098	-12430	20992	323.69
109	355.6	46725	-1416	39932	182.03
527	356.8	54098	-1645	7309	181.99
401	357.3	-3387	1384	10298	7.72
290	360.1	-5312	-6072	13565	333.41
173	365.7	-18849	8149	26930	17.61
504	367.5	41665	4800	35176	172.16
525	370.6	51419	-1987	44645	182.55

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY WEIGHT

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
153	373.7	-22215	134	29034	0.26
374	375.6	29241	1908	22504	175.14
593	376.1	104289	483	97473	179.72
294	383.0	-6904	-7562	15667	331.14
269	386.2	-4169	1630	11107	8.44
322	386.6	3594	-22303	22535	278.22
588	388.2	86462	13556	80789	170.34
71	388.6	42498	-6081	36195	189.67
54	388.7	34740	-150	27923	180.31
7	390.4	-105051	6666	112068	3.41
18	391.2	38150	-84270	89906	249.60
508	392.8	40052	12889	35646	158.80
68	392.9	38334	-7604	32420	193.56
424	394.1	-86938	47729	105206	26.98
237	403.1	-12662	-17454	26156	318.14
316	403.6	1224	-23392	24052	283.45
591	404.7	92780	-6204	86185	184.13
532	413.4	53055	5328	46543	173.43
629	414.0	82501	-65424	100041	220.84
101	416.2	20980	-3639	14622	194.41
232	416.9	-12358	-23722	30503	308.95
385	422.2	1771	25016	25520	78.59
162	426.7	-6091	2214	13098	9.73
371	428.6	34901	1733	28136	176.47
159	429.9	-7512	-1128	14374	355.50
142	430.4	-24421	-482	31242	359.12
279	430.5	-7908	-6432	16070	336.40
154	432.8	-18423	358	25244	0.81
48	433.5	26596	-6152	20713	197.28
471	434.8	-2945	4914	10930	26.72
292	435.0	-5377	-7678	14411	327.81
87	439.8	24033	-6219	18587	199.55
161	441.0	-3793	-1316	10693	352.93
305	449.1	-302	-23285	24349	287.00
321	450.4	2833	-22765	23111	279.93
639	451.1	111426	-13341	105455	187.27
58	461.5	34896	2965	28234	173.97
587	467.1	85444	14027	79868	169.88
100	482.3	24886	-706	18082	182.24
341	495.9	8373	-10072	10191	261.22
114	497.8	46877	-40053	56648	225.00

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY WEIGHT

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
247	498.5	-10483	-3366	17625	348.99
270	498.6	-3037	-375	9862	357.82
124	502.6	5588	-32056	32079	272.20
166	510.2	-5366	9439	15413	37.77
134	514.9	-10061	-4047	17357	346.52
560	517.1	43836	-3598	37192	185.55
127	518.4	-1542	-18693	20477	294.10
601	518.5	159725	3019	152973	178.87
81	523.7	31988	-11069	27496	203.74
28	527.4	27827	13017	24715	148.22
42	527.7	59895	3403	53186	176.33
195	529.5	-30158	-18122	41178	333.89
133	533.6	-9310	-3043	16412	349.31
543	534.3	46637	6380	40327	170.90
55	550.1	32144	3929	25629	171.18
387	553.2	-2242	25447	27012	70.40
396	571.8	10549	49472	49612	94.31
66	580.1	33619	-4264	27138	189.04
370	584.8	28470	-3756	21976	189.84
276	595.2	-9348	-7762	17933	334.35
75	603.1	45674	-14000	41301	199.81
418	604.9	-73703	1722	80540	1.23
299	609.5	-1713	-21825	23433	291.35
565	619.0	48359	5719	41933	172.16
119	619.8	79924	-51045	89163	214.92
91	637.8	20748	-2272	14114	189.26
592	650.0	102595	-4782	95896	182.86
326	651.4	4072	-20936	21115	277.47
144	653.1	-27063	150	33881	0.25
141	654.7	-23923	707	30749	1.32
72	660.8	45098	-8286	39167	192.21
147	661.2	-32728	-10430	40898	345.23
92	666.0	21549	-1591	14817	186.16
178	666.1	-44426	-6050	51600	353.27
64	671.2	40109	3866	33515	173.38
111	677.6	32628	-17952	31440	214.82
156	681.1	-18322	3830	25430	8.66
79	685.6	41979	-13636	37713	201.20
125	689.0	6830	-25111	25111	269.97
393	689.4	5941	16609	16632	86.98
349	691.4	9054	-9933	10182	257.31

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY WEIGHT

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
585	693.0	73699	5336	67094	171.44
117	694.8	26044	-62264	65164	252.84
521	695.1	38889	-2232	32148	183.98
180	698.9	-40780	-319	47599	359.62
168	699.5	-4420	10749	15551	43.73
148	699.9	-33140	-5815	40379	351.72
595	700.6	119016	-10231	112663	185.21
346	702.6	7535	-10906	10930	266.24
167	702.9	-3183	12853	16286	52.11
410	720.4	-10623	-4860	18106	344.43
76	720.7	48455	-17620	45212	202.94
332	741.9	5065	-22977	23044	274.36
118	751.2	24153	-60944	63362	254.12
300	755.4	-828	-22399	23668	288.85
191	757.6	-46092	-44150	68910	320.16
74	766.8	48573	-11539	43321	195.45
384	780.2	3643	26305	26496	83.12
138	782.4	-22856	-245	29675	359.53
57	791.0	32122	5650	25928	167.41
575	793.8	64743	-6454	58284	186.36
564	798.1	45042	7816	39015	168.44
95	799.1	24203	2748	17600	171.02
77	814.5	51433	-17959	48094	201.93
56	816.9	35737	3732	29159	172.65
229	818.0	-16522	-13706	27067	329.58
519	826.6	38830	-1541	32050	182.76
128	829.9	1177	-21125	21865	284.95
93	831.8	21425	-1136	14651	184.45
137	868.9	-19273	-3485	26322	352.39
157	882.3	-24597	12709	33889	22.03
53	885.0	33724	-505	26911	181.08
49	961.8	22796	-5106	16774	197.72
132	971.3	-7959	-4869	15558	341.76
106	976.2	38481	-3271	31832	185.90
86	981.8	23071	-9121	18637	209.30
392	984.5	2384	18668	19187	76.64
122	1061.4	4128	-28994	29118	275.30
8	1065.7	-88416	6874	95482	4.13
90	1085.1	21228	-3070	14733	192.03
85	1101.2	27727	-8081	22416	201.13
391	1105.0	5262	23815	23866	86.26

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY WEIGHT

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
89	1108.5	22184	-1705	15460	186.33
335	1112.6	3818	-9395	9862	287.71
586	1124.2	85553	14020	79974	169.90
27	1125.1	28374	12433	24885	150.02
108	1143.4	42317	-3070	35631	184.94
308	1145.9	-1881	-29577	30830	286.39
638	1153.7	113217	-9345	106809	185.02
20	1164.4	68347	-50572	79646	219.42
143	1187.4	-22259	2993	29230	5.88
584	1188.5	77608	11089	71653	171.10
63	1190.6	43045	2610	36321	175.88
59	1240.6	39676	3388	33032	174.11
163	1258.9	-7598	7456	16230	27.35
61	1270.7	51540	2268	44780	177.10
83	1319.2	27715	-7536	22214	199.83
344	1354.5	7268	-12013	12022	267.86
103	1404.9	19369	-5813	13832	204.85
50	1467.6	33932	1407	27150	177.03
84	1548.1	27465	-8472	22317	202.31
60	1624.6	56631	-435	49815	180.50
62	1719.5	45058	557	38244	179.17
580	1723.2	72407	-1864	65615	181.63
46	1776.2	30756	1241	23970	177.03
52	1820.4	34520	-1095	27723	182.26
51	1840.9	35653	882	28849	178.25
311	2036.6	145	-31009	31719	282.14
44	2079.4	34175	3677	27603	172.34
123	2231.7	5082	-30731	30780	273.23
306	2372.3	-2074	-23100	24752	291.05
45	2558.6	31093	1323	24311	176.88
158	2907.5	-13782	-1598	20662	355.56
534	3020.9	1858	18150	18815	74.71
94	3082.6	20960	948	14174	176.16
96	3575.4	19236	1545	12514	172.91
41	3845.2	62634	1103	55827	178.87
160	3869.1	-5604	-432	12430	358.01
389	3942.7	-62	20897	22001	71.78
130	3978.0	-5527	-13222	18089	313.04
599	4408.9	148084	4829	141349	178.04
474	4490.6	2726	7759	8772	62.19
582	4525.7	67411	14840	62384	166.24

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY WEIGHT

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
135	4676.5	-14873	-3372	21952	351.16
594	5311.1	115633	-2433	108842	181.28
47	5376.3	33965	-10736	29192	201.58
353	5669.9	8941	-23849	23944	264.91
590	6137.4	87194	1410	80389	178.99
121	7248.4	2834	-26827	27121	278.45
43	7661.9	34523	7459	28692	164.93
40	11893.2	54836	-4186	48200	184.98
	289971.2				

2.5 MASS DISTRIBUTION

The weights from the "Sorted by Weight" database (Subsection 2.4) were scaled up to a full-size structure by multiplying by 27. The scaled-up weights were then divided into weight intervals. The number of pieces and total weight of PAS-3 debris in each weight interval were calculated, producing information that became the basis for the mass-distribution table.

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
MASS DISTRIBUTION

I.D. MARK	WEIGHT (gm)	SCALED-UP WEIGHT (lb)	WEIGHT INTERVAL (lb)	NUMBER OF PIECES	TOTAL WEIGHT (lb)
440	29.0	1.73	1.75 - 2.25	3	5.77
443	32.4	1.93			
444	35.5	2.11			
435	41.4	2.46			
436	43.2	2.57			
439	44.3	2.64			
431	44.5	2.65			
456	44.6	2.65	2.25 2.75	7	18.45
214	45.2	2.69			
455	46.7	2.78			
442	48.7	2.90			
453	49.5	2.95			
644	50.4	3.00			
16	51.0	3.04			
437	52.0	3.10	2.75 3.25	7	21.18
447	52.0	3.10			
600	52.3	3.11			
241	55.5	3.30			
438	56.7	3.38			
224	57.5	3.42			
245	58.6	3.49			
448	58.6	3.49	3.25 3.75	13	46.17
473	59.4	3.54			
434	59.7	3.55			
202	60.5	3.60			
450	60.5	3.60			
225	61.0	3.63			
452	62.1	3.70			
559	62.7	3.73			
216	62.8	3.74			
189	63.9	3.80			
212	64.2	3.82			
206	64.6	3.85			
284	65.0	3.87			
446	65.8	3.92			
603	66.4	3.95			
221	66.5	3.96			
457	66.5	3.96			
3	67.3	4.01			
630	69.0	4.11			
417	69.2	4.12			

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
MASS DISTRIBUTION

I.D. MARK	WEIGHT (gm)	SCALED-UP WEIGHT (lb)	WEIGHT INTERVAL (lb)		NUMBER OF PIECES	TOTAL WEIGHT (lb)
445	69.5	4.14	3.75	4.25	16	64.25
510	70.1	4.17				
25	70.3	4.18				
476	70.4	4.19				
620	70.6	4.20				
246	71.8	4.27				
619	71.9	4.28				
561	72.2	4.30				
297	73.1	4.35				
624	73.6	4.38				
623	74.1	4.41				
288	74.4	4.43				
458	75.1	4.47				
233	75.5	4.49				
641	76.8	4.57				
213	77.8	4.63				
552	78.0	4.64	4.25	4.75	17	76.73
459	78.2	4.65				
4	78.6	4.68				
604	78.9	4.70				
24	79.2	4.71				
555	79.8	4.75				
285	80.7	4.80				
9	80.8	4.81				
615	81.0	4.82				
516	81.1	4.83				
185	81.5	4.85				
211	82.6	4.92				
252	83.1	4.95				
429	83.7	4.98				
197	84.0	5.00				
478	86.1	5.13				
265	86.9	5.17				
264	87.5	5.21				
260	88.0	5.24				
605	88.0	5.24				
181	88.6	5.27				
640	88.8	5.29				
261	88.9	5.29				
451	89.6	5.33				
466	89.6	5.33				

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
MASS DISTRIBUTION

I.D. MARK	WEIGHT (gm)	SCALED-UP WEIGHT (lb)	WEIGHT INTERVAL (lb)		NUMBER OF PIECES	TOTAL WEIGHT (lb)
622	89.8	5.35	5.25	5.75	17	92.50
642	89.9	5.35				
490	90.0	5.36				
506	90.1	5.36				
217	90.3	5.38				
282	91.6	5.45				
199	92.4	5.50				
460	92.7	5.52				
259	93.2	5.55				
481	96.0	5.71				
17	96.1	5.72				
433	96.3	5.73				
637	97.2	5.79				
201	97.9	5.83				
338	98.2	5.85				
170	98.6	5.87				
244	98.8	5.88				
219	99.1	5.90	5.75	6.25	24	144.18
577	99.1	5.90				
461	99.3	5.91				
454	99.5	5.92				
616	99.6	5.93				
243	99.7	5.93				
480	100.1	5.96				
550	101.0	6.01				
626	101.5	6.04				
236	101.8	6.06				
23	102.4	6.10				
463	102.4	6.10				
234	102.8	6.12				
602	103.1	6.14				
614	103.1	6.14				
400	103.9	6.18				
489	103.9	6.18				
462	104.3	6.21				
220	104.9	6.24				
296	105.3	6.27				
235	105.5	6.28				
283	105.6	6.29				
226	106.0	6.31				
549	106.2	6.32				

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
MASS DISTRIBUTION

I.D. MARK	WEIGHT (gm)	SCALED-UP WEIGHT (lb)	WEIGHT INTERVAL (lb)		NUMBER OF PIECES	TOTAL WEIGHT (lb)
606	106.6	6.35	6.25	6.75	24	155.38
175	107.3	6.39				
278	107.4	6.39				
386	107.5	6.40				
196	108.0	6.43				
485	108.0	6.43				
193	108.6	6.46				
32	108.8	6.48				
218	108.8	6.48				
209	109.6	6.52				
482	109.8	6.54				
432	109.9	6.54				
33	110.5	6.58				
262	110.7	6.59				
540	111.0	6.61				
412	111.9	6.66				
539	112.0	6.67				
207	112.5	6.70				
428	112.8	6.71				
573	113.7	6.77				
621	113.7	6.77				
488	113.9	6.78				
617	113.9	6.78				
493	115.0	6.85				
215	115.2	6.86				
499	116.7	6.95				
176	116.8	6.95				
475	116.9	6.96				
551	117.4	6.99				
568	117.4	6.99				
472	117.7	7.01				
483	117.9	7.02				
266	118.2	7.04				
174	118.5	7.05				
205	118.7	7.07				
277	118.8	7.07				
15	119.0	7.08				
613	119.1	7.09				
354	120.2	7.15				
612	120.7	7.19				
256	120.8	7.19				

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
MASS DISTRIBUTION

I.D. MARK	WEIGHT (gm)	SCALED-UP WEIGHT (lb)	WEIGHT INTERVAL (lb)		NUMBER OF PIECES	TOTAL WEIGHT (lb)
376	120.9	7.20	6.75	7.25	25	175.22
597	121.0	7.20				
404	121.5	7.23				
513	122.8	7.31				
574	123.1	7.33				
230	124.4	7.40				
302	124.4	7.40				
318	124.4	7.40				
223	124.7	7.42				
179	125.5	7.47				
304	125.5	7.47				
497	125.5	7.47				
325	125.9	7.49				
548	126.6	7.54				
533	127.0	7.56				
514	127.1	7.57				
323	127.2	7.57				
547	127.4	7.58				
355	127.5	7.59				
406	127.5	7.59				
263	128.0	7.62	7.25	7.75	24	180.99
498	128.6	7.65				
507	128.8	7.67				
408	129.0	7.68				
336	129.8	7.73				
634	129.9	7.73				
257	130.0	7.74				
399	130.6	7.77				
171	130.7	7.78				
479	131.7	7.84				
572	131.7	7.84				
182	131.8	7.85				
152	131.9	7.85				
295	131.9	7.85				
366	132.7	7.90				
151	133.7	7.96				
430	134.4	8.00				
494	134.9	8.03				
198	135.8	8.08				
368	135.8	8.08				
381	136.0	8.10				

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
MASS DISTRIBUTION

I.D. MARK	WEIGHT (gm)	SCALED-UP WEIGHT (lb)	WEIGHT INTERVAL (lb)		NUMBER OF PIECES	TOTAL WEIGHT (lb)
449	137.2	8.17	7.75	8.25	18	143.68
569	137.4	8.18				
518	137.7	8.20				
258	137.9	8.21				
426	139.1	8.28				
511	139.1	8.28				
250	139.4	8.30				
425	139.4	8.30				
646	139.4	8.30				
487	139.5	8.30				
509	139.6	8.31				
611	139.6	8.31				
501	140.1	8.34				
22	140.3	8.35				
367	141.2	8.40				
210	141.4	8.42				
388	141.4	8.42				
12	141.9	8.45				
303	142.6	8.49	8.25	8.75	25	211.03
253	142.7	8.49				
556	142.9	8.51				
477	143.2	8.52				
538	143.5	8.54				
470	143.7	8.55				
492	143.7	8.55				
635	144.1	8.58				
420	145.1	8.64				
631	145.5	8.66				
398	146.9	8.74				
272	147.9	8.80				
357	148.2	8.82				
515	150.5	8.96				
112	150.7	8.97				
503	151.1	8.99				
314	152.8	9.10				
187	153.1	9.11				
566	153.4	9.13				
383	153.7	9.15				
535	154.3	9.18				
567	154.5	9.20				
345	154.6	9.20				

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
MASS DISTRIBUTION

I.D. MARK	WEIGHT (gm)	SCALED-UP WEIGHT (lb)	WEIGHT INTERVAL (lb)		NUMBER OF PIECES	TOTAL WEIGHT (lb)
484	155.2	9.24	8.75	9.25	13	117.86
165	155.5	9.26				
319	156.2	9.30				
337	156.7	9.33				
333	158.2	9.42				
554	158.8	9.45				
286	159.4	9.49				
469	159.8	9.51				
421	160.2	9.54				
523	160.4	9.55				
563	161.3	9.60				
500	161.7	9.63				
359	162.1	9.65				
486	162.6	9.68	9.25	9.75	17	162.21
222	162.7	9.68				
274	163.0	9.70				
26	163.1	9.71				
249	163.4	9.73				
13	164.9	9.82				
618	165.0	9.82				
378	165.4	9.85				
379	166.3	9.90				
495	167.1	9.95				
598	168.7	10.04				
405	168.9	10.05				
363	169.5	10.09				
150	169.7	10.10	9.75	10.25	12	120.28
643	171.5	10.21				
228	171.8	10.23				
557	171.9	10.23				
115	172.7	10.28				
14	173.3	10.32				
530	173.6	10.33				
204	173.8	10.35				
365	174.5	10.39				
67	174.6	10.39				
99	175.3	10.43				
240	176.4	10.50				
113	176.7	10.52				
287	178.1	10.60				
531	178.3	10.61				

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
MASS DISTRIBUTION

I.D. MARK	WEIGHT (gm)	SCALED-UP WEIGHT (lb)	WEIGHT INTERVAL (lb)		NUMBER OF PIECES	TOTAL WEIGHT (lb)
362	178.6	10.63	10.25	10.75	14	146.77
238	179.2	10.67				
155	180.6	10.75				
468	180.9	10.77				
275	181.0	10.77				
10	181.1	10.78				
528	181.2	10.79				
330	181.6	10.81				
529	181.6	10.81				
102	182.3	10.85				
280	182.3	10.85				
361	183.1	10.90				
347	183.8	10.94				
553	184.2	10.96				
273	184.5	10.98				
465	185.4	11.04	10.75	11.25	17	185.85
571	185.8	11.06				
390	186.7	11.11				
200	188.4	11.21				
248	188.4	11.21				
78	189.6	11.29				
628	190.1	11.32				
636	190.3	11.33				
356	190.7	11.35				
271	190.8	11.36				
309	191.0	11.37				
183	191.8	11.42				
6	192.2	11.44				
104	192.7	11.47				
627	193.3	11.51				
351	194.2	11.56				
5	195.9	11.66				
251	196.4	11.69				
496	197.3	11.74				
380	197.6	11.76				
184	197.9	11.78				
194	198.2	11.80				
524	198.6	11.82				
416	198.8	11.83				
407	199.1	11.85				
19	199.7	11.89				

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
MASS DISTRIBUTION

I.D. MARK	WEIGHT (gms)	SCALED-UP WEIGHT (lb)	WEIGHT INTERVAL (lb)		NUMBER OF PIECES	TOTAL WEIGHT (lb)
98	200.1	11.91	11.25	12.75	35	415.31
520	200.7	11.95				
242	202.3	12.04				
610	202.5	12.05				
348	205.0	12.20				
372	205.1	12.21				
11	206.0	12.26				
328	207.0	12.32				
491	207.7	12.36				
31	208.4	12.40				
589	209.1	12.45				
164	211.4	12.58				
267	212.7	12.66				
464	212.9	12.67				
352	214.3	12.76				
583	215.0	12.80				
441	215.1	12.80				
545	215.5	12.83				
120	216.9	12.91				
126	217.2	12.93				
373	217.9	12.97				
2	219.6	13.07				
254	219.7	13.08				
313	220.5	13.13				
334	220.9	13.15				
537	224.3	13.35				
413	224.5	13.36				
343	224.6	13.37				
208	225.0	13.39				
69	225.6	13.43				
576	226.0	13.45				
581	229.2	13.64				
364	230.1	13.70				
517	230.5	13.72				
570	230.9	13.74				
512	231.0	13.75				
116	231.1	13.76				
255	231.1	13.76				
360	231.5	13.78				
315	231.8	13.80				
414	232.5	13.84				

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
MASS DISTRIBUTION

I.D. MARK	WEIGHT (gm)	SCALED-UP WEIGHT (lb)	WEIGHT INTERVAL (lb)	NUMBER OF PIECES	TOTAL WEIGHT (lb)
375	234.9	13.98	12.75 14.25	28	374.24
377	239.8	14.27			
427	241.0	14.35			
80	243.1	14.47			
310	243.4	14.49			
298	245.6	14.62			
21	251.5	14.97			
88	251.6	14.98			
502	251.7	14.98			
409	252.6	15.04			
419	254.0	15.12			
70	255.6	15.21			
382	256.2	15.25			
65	260.2	15.49			
186	261.5	15.57			
227	264.7	15.76			
329	264.8	15.76			
596	265.0	15.77			
358	267.1	15.90			
339	268.1	15.96			
397	269.1	16.02			
402	269.5	16.04			
411	270.5	16.10			
73	272.1	16.20			
340	272.4	16.21			
422	273.9	16.30			
192	274.2	16.32			
320	274.9	16.36			
301	275.4	16.39			
522	275.8	16.42			
578	275.8	16.42			
231	278.5	16.58			
645	281.1	16.73	14.25 16.75	32	500.05
312	281.5	16.76			
403	282.6	16.82			
30	283.4	16.87			
289	287.0	17.08			
342	288.4	17.17			
203	289.3	17.22			
169	290.4	17.29			
105	290.7	17.30			

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
MASS DISTRIBUTION

I.D. MARK	WEIGHT (gm)	SCALED-UP WEIGHT (lb)	WEIGHT INTERVAL (lb)		NUMBER OF PIECES	TOTAL WEIGHT (lb)
546	293.4	17.46	16.75	18.25	17	296.99
350	297.6	17.71				
136	297.7	17.72				
190	297.9	17.73				
317	298.8	17.79				
536	298.8	17.79				
307	299.5	17.83				
146	306.2	18.23				
331	306.2	18.23				
542	307.7	18.32				
394	311.4	18.54				
82	314.2	18.70				
29	315.1	18.76				
558	316.3	18.83				
526	317.5	18.90				
415	319.1	18.99				
110	319.2	19.00				
544	319.4	19.01				
632	319.9	19.04				
579	321.2	19.12				
172	322.6	19.20				
145	323.4	19.25				
423	324.1	19.29				
562	324.2	19.30				
633	326.2	19.42				
395	327.1	19.47				
369	329.0	19.58				
505	338.6	20.16				
541	339.3	20.20				
177	340.0	20.24				
625	340.6	20.27				
107	353.3	21.03				
97	353.9	21.07				
131	354.0	21.07				
109	355.6	21.17				
527	356.8	21.24				
401	357.3	21.27				
290	360.1	21.43	18.25	21.75	29	571.86
173	365.7	21.77				
504	367.5	21.88				
525	370.6	22.06				

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
MASS DISTRIBUTION

I.D. MARK	WEIGHT (gm)	SCALED-UP WEIGHT (lb)	WEIGHT INTERVAL (lb)		NUMBER OF PIECES	TOTAL WEIGHT (lb)
153	373.7	22.24	21.75	23.25	13	294.11
374	375.6	22.36				
593	376.1	22.39				
294	383.0	22.80				
269	386.2	22.99				
322	386.6	23.01				
588	388.2	23.11				
71	388.6	23.13				
54	388.7	23.14				
7	390.4	23.24				
18	391.2	23.29				
508	392.8	23.38				
68	392.9	23.39				
424	394.1	23.46	23.25	26.75	24	599.84
237	403.1	23.99				
316	403.6	24.02				
591	404.7	24.09				
532	413.4	24.61				
629	414.0	24.64				
101	416.2	24.77				
232	416.9	24.82				
385	422.2	25.13				
162	426.7	25.40				
371	428.6	25.51				
159	429.9	25.59				
142	430.4	25.62				
279	430.5	25.63				
154	432.8	25.76	26.75	28.25	4	108.94
48	433.5	25.80				
471	434.8	25.88				
292	435.0	25.89				
87	439.8	26.18				
161	441.0	26.25				
305	449.1	26.73				
321	450.4	26.81	26.75	28.25	4	108.94
639	451.1	26.85				
58	461.5	27.47				
587	467.1	27.80				
100	482.3	28.71				
341	495.9	29.52	26.75	28.25	4	108.94
114	497.8	29.63				

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
MASS DISTRIBUTION

I.D. MARK	WEIGHT (gm)	SCALED-UP WEIGHT (lb)	WEIGHT INTERVAL (lb)		NUMBER OF PIECES	TOTAL WEIGHT (lb)
247	498.5	29.67	28.25	31.75	15	456.14
270	498.6	29.68				
124	502.6	29.92				
166	510.2	30.37				
134	514.9	30.65				
560	517.1	30.78				
127	518.4	30.86				
601	518.5	30.86				
81	523.7	31.17				
28	527.4	31.39				
42	527.7	31.41				
195	529.5	31.52				
133	533.6	31.76				
543	534.3	31.80				
55	550.1	32.74				
387	553.2	32.93	31.75	33.25	4	129.24
396	571.8	34.04				
66	580.1	34.53				
370	584.8	34.81				
276	595.2	35.43				
75	603.1	35.90				
418	604.9	36.01				
299	609.5	36.28				
565	619.0	36.85				
119	619.8	36.89				
91	637.8	37.96				
592	650.0	38.69	33.25	36.75	7	246.99
326	651.4	38.77				
144	653.1	38.88				
141	654.7	38.97				
72	660.8	39.33				
147	661.2	39.36				
92	666.0	39.64				
178	666.1	39.65				
64	671.2	39.95				
111	677.6	40.33				
156	681.1	40.54				
79	685.6	40.81				
125	689.0	41.01				
393	689.4	41.04				
349	691.4	41.16				

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
MASS DISTRIBUTION

I.D. MARK	WEIGHT (gm)	SCALED-UP WEIGHT (lb)	WEIGHT INTERVAL (lb)		NUMBER OF PIECES	TOTAL WEIGHT (lb)
585	693.0	41.25	36.75	43.25	29	1169.88
117	694.8	41.36				
521	695.1	41.38				
180	698.9	41.60				
168	699.5	41.64				
148	699.9	41.66				
595	700.6	41.70				
346	702.6	41.82				
167	702.9	41.84				
410	720.4	42.88				
76	707.7	42.90				
332	741.1	44.16				
118	751.2	44.72				
300	755.4	44.97				
191	757.6	45.10				
74	766.8	45.64				
384	780.2	46.44				
138	782.4	46.57				
57	791.0	47.08				
575	793.8	47.25				
564	798.1	47.51				
95	799.1	47.57				
77	814.5	48.48	43.25	56.75	20	957.84
56	816.9	48.63				
229	818.0	48.69				
519	826.6	49.20				
128	829.9	49.40				
93	831.8	49.51				
137	868.9	51.72				
157	882.3	52.52				
53	885.0	52.68				
49	961.8	57.25				
132	971.3	57.82	56.75	63.25	6	353.40
106	976.2	58.11				
86	981.8	58.44				
392	984.5	58.60				
122	1061.4	63.18				
8	1065.7	63.44				
90	1085.1	64.59				
85	1101.2	65.55				
391	1105.0	65.77				

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
MASS DISTRIBUTION

I.D. MARK	WEIGHT (gm)	SCALED-UP WEIGHT (lb)	WEIGHT INTERVAL (lb)		NUMBER OF PIECES	TOTAL WEIGHT (lb)
89	1108.5	65.98	63.25	76.75	18	1236.42
335	1112.6	66.23				
586	1124.2	66.92				
27	1125.1	66.97				
108	1143.4	68.06				
308	1145.9	68.21				
638	1153.7	68.67				
20	1164.4	69.31				
143	1187.4	70.68				
584	1188.5	70.75				
63	1190.6	70.87				
59	1240.6	73.85				
163	1258.9	74.94				
61	1270.7	75.64				
83	1319.2	78.53				
344	1354.5	80.63				
103	1404.9	83.63				
50	1467.6	87.36				
84	1548.1	92.15				
60	1624.6	96.70				
62	1719.5	102.35				
580	1723.2	102.57				
46	1776.2	105.73				
52	1820.4	108.36				
51	1840.9	109.58				
311	2036.6	121.23				
44	2079.4	123.78				
123	2231.7	132.84				
306	2372.3	141.21				
45	2558.6	152.30				
158	2907.5	173.07				
534	3020.9	179.82				
94	3082.6	183.49				
96	3575.4	212.82				
41	3845.2	228.88				
160	3869.1	230.31				
389	3942.7	234.69				
130	3978.0	236.79				
599	4408.9	262.44				
474	4490.6	267.30				
582	4525.7	269.39				

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
MASS DISTRIBUTION

I.D. MARK	WEIGHT (gm)	SCALED-UP WEIGHT (lb)	WEIGHT INTERVAL (lb)	NUMBER OF PIECES	TOTAL WEIGHT (lb)
135	4676.5	278.37			
594	5311.1	316.14			
47	5367.3	319.49			
353	5669.9	337.50			
590	6137.4	365.33			
121	7248.4	431.46			
43	7661.9	456.07			
40	11893.2	707.94			
Totals:		17259.95	>76.75	35	7410.25
				623	17259.95

2.6 SORTED BY RANGE

The database from Subsection 2.4 was sorted by range from nearest to farthest to generate the data presented in this subsection.

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY RANGE

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
340	272.4	6257	-7813	7833	274.11
339	268.1	6578	-8351	8355	271.64
474	4490.6	2726	7759	8772	62.19
338	98.2	6388	-9052	9062	272.72
402	269.5	-2801	810	9653	4.81
337	156.7	5875	-9656	9702	275.58
270	498.6	-3037	-375	9862	357.82
335	1112.6	3818	-9395	9862	287.71
336	129.8	3808	-9586	10047	287.43
469	159.8	-3118	-2007	10137	348.58
349	691.4	9054	-9933	10182	257.31
341	495.9	8373	-10072	10191	261.22
358	267.1	10027	-9685	10203	251.67
359	162.1	10170	-9732	10293	250.99
401	357.3	-3387	1384	10298	7.72
466	89.6	-3135	-3415	10522	341.06
468	180.9	-3407	-2861	10618	344.37
347	183.8	6144	-10634	10655	273.63
161	441.0	-3793	-1316	10693	352.93
475	116.9	14438	7534	10716	135.32
465	185.4	-3290	-3794	10797	339.43
470	143.7	-4066	-380	10891	358.00
348	205.0	8459	-10805	10928	261.37
346	702.6	7535	-10906	10930	266.24
471	434.8	-2945	4914	10930	26.72
350	297.6	9415	-10718	11028	256.38
400	103.9	-4139	1654	11081	8.58
343	224.6	7004	-11092	11093	269.04
360	231.5	14025	-8441	11099	229.51
269	386.2	-4169	1630	11107	8.44
472	117.7	-1976	7001	11241	38.52
415	319.1	-3166	-5244	11277	332.29
414	232.5	-2832	-5986	11356	328.19
345	154.6	7405	-11425	11440	267.06
342	288.4	7346	-11454	11466	267.36
463	102.4	-4613	-2311	11662	348.57
403	282.6	-4991	-713	11830	356.54
22	140.3	17717	4647	11848	156.91
344	1354.5	7268	-12013	12022	267.86
464	212.9	-4386	-4543	12090	337.93
445	69.5	-3998	5691	12222	27.75

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY RANGE

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
21	251.5	18188	4510	12231	158.36
31	208.4	18773	2721	12261	167.18
33	110.5	18815	2961	12357	166.13
462	104.3	-5545	-532	12375	357.54
334	220.9	4627	-12216	12411	280.17
160	3869.1	-5604	-432	12430	358.01
23	102.4	18484	4386	12464	159.39
473	59.4	1127	11095	12469	62.85
96	3575.4	19236	1545	12514	172.91
25	70.3	18288	5428	12690	154.67
267	212.7	-4403	5949	12701	27.93
265	86.9	-4785	5229	12727	24.26
333	158.2	5045	-12703	12827	277.94
444	35.5	-2231	9104	12836	45.18
449	137.2	-5607	3288	12853	14.82
476	70.4	16712	8257	12887	140.15
352	214.3	8789	-12745	12897	261.21
287	178.1	-5799	-2675	12897	348.03
351	194.2	9161	-12689	12903	259.54
24	79.2	18804	4938	12964	157.61
162	426.7	-6091	2214	13098	9.73
288	74.4	-5996	-2740	13104	347.93
266	118.2	-5726	4218	13235	18.59
460	92.7	-6393	-934	13244	355.96
289	287.0	-5310	-5361	13260	336.15
32	108.8	18154	6947	13295	148.50
286	159.4	-6148	-3052	13320	346.76
399	130.6	-6441	1381	13331	5.94
357	148.2	12958	-11858	13354	242.63
398	146.9	-5559	1523	13463	6.50
461	99.3	-6669	-1116	13533	355.27
450	60.5	-6357	3153	13547	13.46
290	360.1	-5312	-6072	13565	333.41
443	32.4	-2677	9694	13569	45.59
165	155.5	-5489	5772	13594	25.13
330	181.6	2994	-13173	13717	286.19
331	306.2	3341	-13343	13789	284.61
404	121.5	-6979	-845	13823	356.49
103	1404.9	19369	-5813	13832	204.85
364	230.1	20028	-4262	13880	197.88
477	143.2	20686	801	13892	176.69

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY RANGE

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
365	174.5	20566	-2104	13908	188.70
285	80.7	-6836	-2730	13925	348.69
329	264.8	2884	-13430	13994	286.32
91	637.8	20748	-2272	14114	189.26
94	3082.6	20960	948	14174	176.16
284	65.0	-7074	-2897	14191	348.22
478	86.1	21065	827	14271	176.68
451	89.6	-7022	3501	14276	14.19
452	62.1	-7145	3327	14354	13.40
159	429.9	-7512	-1128	14374	355.50
413	224.5	-5380	-7642	14394	327.93
292	435.0	-5377	-7678	14411	327.81
30	283.4	21023	2684	14456	169.30
448	58.6	-7414	2571	14462	10.24
164	211.4	-6341	6075	14494	24.78
479	131.7	21353	56	14535	179.78
446	65.8	-6573	5762	14578	23.28
101	416.2	20980	-3639	14622	194.41
447	52.0	-6771	5442	14639	21.83
93	831.8	21425	-1136	14651	184.45
361	183.1	15224	-12043	14686	235.09
442	48.7	-2353	11485	14698	51.39
90	1085.1	21228	-3070	14733	192.03
453	49.5	-7749	2340	14754	9.13
29	315.1	21202	3423	14785	166.61
92	666.0	21549	-1591	14817	186.16
394	311.4	5783	14852	14888	86.01
362	178.6	14124	-12992	14905	240.65
26	163.1	21273	4275	15074	163.53
280	182.3	-7374	-5525	15230	338.73
383	153.7	22126	1515	15383	174.35
166	510.2	-5366	9439	15413	37.77
89	1108.5	22184	-1705	15460	186.33
168	699.5	-4420	10749	15551	43.73
132	971.3	-7959	-4869	15558	341.76
264	87.5	-8329	3643	15579	13.53
411	270.5	-6884	-7517	15629	331.25
295	131.9	-7026	-7260	15632	332.33
294	383.0	-6904	-7562	15667	331.14
412	111.9	-6957	-7798	15829	330.48
102	182.3	22210	-3707	15832	193.54

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY RANGE

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
283	105.6	-8606	-4332	16021	344.31
405	168.9	-9091	-2206	16062	352.10
279	430.5	-7908	-6432	16070	336.40
480	100.1	22899	1670	16167	174.07
163	1258.9	-7598	7456	16230	27.35
379	166.3	23019	1508	16271	174.68
167	702.9	-3183	12853	16286	52.11
459	78.2	-9490	-763	16326	357.32
133	533.6	-9310	-3043	16412	349.31
278	107.4	-8545	-5783	16415	339.37
441	215.1	-2676	13428	16445	54.74
406	127.5	-9587	-1765	16500	353.86
393	689.4	5941	16609	16632	86.98
282	91.6	-9275	-4532	16719	344.27
49	961.8	22796	-5106	16774	197.72
482	109.8	23594	984	16805	176.64
368	135.8	23329	-3258	16830	191.16
380	197.6	23442	2625	16830	171.03
454	99.5	-10041	1607	16935	5.45
457	66.5	-10263	-376	17085	358.74
88	251.6	23658	-2983	17102	190.04
458	75.1	-10413	-403	17236	358.66
263	128.0	-10319	2571	17329	8.53
134	514.9	-10061	-4047	17357	346.52
481	96.0	24215	404	17401	178.67
408	129.0	-10266	-3641	17467	347.97
483	117.9	24303	-302	17488	180.99
455	46.7	-10639	1704	17540	5.57
262	110.7	-10559	2467	17551	8.08
95	799.1	24203	2748	17600	171.02
247	498.5	-10483	-3366	17625	348.99
261	88.9	-10706	2731	17735	8.86
407	199.1	-10490	-4024	17770	346.91
276	595.2	-9348	-7762	17933	334.35
378	165.4	24848	306	18033	179.03
100	482.3	24886	-706	18082	182.24
130	3978.0	-5527	-13222	18089	313.04
410	720.4	-10623	-4860	18106	344.43
367	141.2	24725	-2864	18134	189.09
274	163.0	-7049	-11689	18136	319.87
435	41.4	-1394	16189	18152	63.10

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY RANGE

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
260	88.0	-11401	-59	18219	359.82
377	239.8	25085	955	18291	177.01
275	181.0	-8036	-10752	18337	324.10
381	136.0	25003	2873	18410	171.02
273	184.5	-7485	-11611	18423	320.93
485	108.0	24346	5897	18494	161.40
87	439.8	24333	-6219	18587	199.55
409	252.6	-11450	-3495	18599	349.17
259	93.2	-11777	-821	18613	357.47
440	29.0	-3232	15668	18614	57.32
86	981.8	23071	-9121	18637	209.30
436	43.2	-278	17324	18721	67.73
456	44.6	-11752	2460	18732	7.55
534	3020.9	1858	18150	18815	74.71
277	118.8	-10682	-7300	18962	337.36
366	132.7	25718	-3222	19172	189.67
392	984.5	2384	18668	19187	76.64
438	56.7	1393	18406	19189	73.58
555	79.8	25701	3485	19202	169.54
437	52.0	130	18429	19605	70.05
256	120.8	-13017	1434	19886	4.14
554	158.8	26874	1051	20083	177.00
432	109.9	-2827	17753	20204	61.49
99	175.3	26982	1294	20206	176.33
296	105.3	-6122	-15745	20380	309.41
363	169.5	19828	-15723	20408	230.39
127	518.4	-1542	-18693	20477	294.10
382	256.2	27110	3746	20635	169.54
158	2907.5	-13782	-1598	20662	355.56
617	113.9	27520	236	20703	179.35
48	433.5	26596	-6152	20713	197.28
439	44.3	-1379	19204	20881	66.88
369	329.0	27337	-3878	20882	190.70
484	155.2	27565	-2902	20949	187.96
257	130.0	-14165	-251	20984	359.31
131	354.0	-10098	-12430	20992	323.69
248	188.4	-13822	-4198	21062	348.50
326	651.4	4072	-20936	21115	277.47
258	137.9	-14500	-1448	21367	356.11
249	163.4	-14505	-1491	21375	356.00
618	165.0	27923	3601	21410	170.32

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY RANGE

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
255	231.1	-13982	5347	21476	14.42
325	125.9	4315	-21375	21521	276.68
252	83.1	-14786	1600	21663	4.23
328	207.0	4334	-21714	21856	276.53
128	829.9	1177	-21125	21865	284.95
135	4676.5	-14873	-3372	21952	351.16
486	162.6	28335	-4411	21965	191.58
250	139.4	-15146	-230	21965	359.40
370	584.8	28470	-3756	21976	189.84
251	196.4	-15127	1316	21984	3.43
389	3942.7	-62	20897	22001	71.78
83	1319.2	27715	-7536	22214	199.83
84	1548.1	27465	-8472	22317	202.31
253	142.7	-15230	3801	22373	9.78
85	1101.2	27727	-8081	22416	201.13
104	192.7	28117	-7253	22500	198.80
254	219.7	-15377	3698	22501	9.46
374	375.6	29241	1908	22504	175.14
126	217.2	10660	-22178	22508	260.17
322	386.6	3594	-22303	22535	278.22
433	96.3	-2390	20698	22654	66.02
434	59.7	-3187	20337	22665	63.80
272	147.9	-7115	-17891	22676	307.91
244	98.8	-14846	-7825	23034	340.14
332	741.9	5065	-22977	23044	274.36
298	245.6	-3041	-20873	23084	295.28
321	450.4	2833	-22765	23111	279.93
619	71.9	29286	5500	23131	166.25
136	297.7	-16077	-4839	23401	348.07
320	274.9	2882	-23092	23425	279.67
299	609.5	-1713	-21825	23433	291.35
271	190.8	-7559	-18547	23467	307.78
553	184.2	30282	1748	23529	175.74
246	71.8	-12715	-13150	23547	326.05
323	127.2	3247	-23377	23649	278.68
300	755.4	-828	-22399	23668	288.85
317	298.8	1584	-23235	23817	282.69
170	98.6	-3994	21275	23865	63.06
391	1105.0	5262	23815	23866	86.26
303	142.6	118	-22978	23934	286.26
353	5669.9	8941	-23849	23944	264.91

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY RANGE

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
297	73.1	-6543	-19882	23955	303.90
46	1776.2	30756	1241	23970	177.03
302	124.4	-457	-22852	23982	287.66
316	403.6	1224	-23392	24052	283.45
301	275.4	-584	-23071	24230	287.79
620	70.6	29945	7391	24279	162.28
45	2558.6	31093	1323	24311	176.88
305	449.1	-302	-23285	24349	287.00
612	120.7	29007	10028	24350	155.68
490	90.0	30931	-3510	24367	188.28
390	186.7	-153	23357	24376	73.38
304	125.5	-24	-23399	24379	286.30
616	99.6	31283	-291	24467	180.68
356	190.7	6029	-24496	24508	271.85
388	141.4	-2694	22744	24653	67.30
556	142.9	31495	-1017	24698	182.36
28	527.4	27827	13017	24715	148.22
236	101.8	-9613	-18471	24722	311.66
243	99.7	-16735	-7581	24743	342.16
306	2372.3	-2074	-23100	24752	291.05
242	202.3	-17433	-5251	24813	347.78
27	1125.1	28374	12433	24885	150.02
245	58.6	-15743	-10550	24906	334.94
155	180.6	-18114	1103	24956	2.53
557	171.9	31877	-1220	25088	182.79
125	689.0	6830	-25111	25111	269.97
373	217.9	31830	2682	25156	173.88
611	139.6	31318	5805	25178	166.67
154	432.8	-18423	358	25244	0.81
487	139.5	31606	-4897	25267	191.18
489	103.9	31306	-6294	25284	194.41
318	124.4	1548	-24867	25419	281.97
156	681.1	-18322	3830	25430	8.66
386	107.5	207	24579	25452	74.95
552	78.0	32229	1875	25481	175.78
314	152.8	2594	-25151	25503	279.53
385	422.2	1771	25016	25520	78.59
55	550.1	32144	3929	25629	171.18
241	55.5	-15559	-12510	25637	330.79
227	264.7	-17720	-7442	25642	343.13
416	198.8	-18619	4160	25775	9.29

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY RANGE

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
57	791.0	32122	5650	25928	167.41
228	171.8	-16594	-11215	25959	334.40
82	314.2	31738	-7909	26145	197.61
237	403.1	-12662	-17454	26156	318.14
615	81.0	33052	451	26238	179.01
319	156.2	3099	-26004	26269	278.14
137	868.9	-19273	-3485	26322	352.39
551	117.4	33104	1958	26359	175.74
234	102.8	-8508	-21452	26364	305.54
169	290.4	-5894	23152	26413	61.23
376	120.9	33222	1046	26425	177.73
354	120.2	6280	-26483	26488	271.16
98	200.1	33024	3871	26490	171.60
384	780.2	3643	26305	26496	83.12
613	119.1	33289	-1375	26506	182.97
226	106.0	-19014	-5989	26517	346.95
488	113.9	32449	-6821	26523	194.90
238	179.2	-13384	-17268	26577	319.48
375	234.9	33504	1129	26710	177.58
355	127.5	6178	-26764	26772	271.37
240	176.4	-14440	-16316	26797	322.49
550	101.0	33625	2186	26896	175.34
53	885.0	33724	-505	26911	181.08
65	260.2	33733	-400	26918	180.85
173	365.7	-18849	8149	26930	17.61
387	553.2	-2242	25447	27012	70.40
229	818.0	-16522	-13706	27067	329.58
121	7248.4	2834	-26827	27121	278.45
66	580.1	33619	-4264	27138	189.04
50	1467.6	33932	1407	27150	177.03
174	118.5	-19923	5097	27223	10.79
221	66.5	-20458	351	27278	0.74
81	523.7	31988	-11069	27496	203.74
175	107.3	-20478	3441	27512	7.18
614	103.1	34369	859	27564	178.21
493	115.0	34385	-1347	27600	182.80
44	2079.4	34175	3677	27603	172.34
372	205.1	34427	799	27621	178.34
492	143.7	34402	-1505	27625	183.12
209	109.6	-19311	-9005	27637	340.98
315	231.8	384	-26906	27664	283.45

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY RANGE

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
52	1820.4	34520	-1095	27723	182.26
230	124.4	-16144	-15778	27860	325.51
231	278.5	-12802	-19787	27866	314.76
54	388.7	34740	-150	27923	180.31
549	106.2	34663	2241	27935	175.40
176	116.8	-21168	773	27997	1.58
371	428.6	34901	1733	28136	176.47
494	134.9	34991	595	28179	178.79
58	461.5	34896	2965	28234	173.97
220	104.9	-21390	1257	28236	2.55
225	61.0	-21378	-3446	28406	353.03
210	141.4	-20336	-8478	28447	342.66
97	353.9	35171	2334	28449	175.29
307	299.5	-2786	-26880	28544	289.66
496	197.3	35104	4027	28572	171.90
235	105.5	-6663	-25237	28612	298.11
43	7661.9	34523	7459	28692	164.93
67	174.6	34932	-5732	28692	191.52
233	75.5	-8679	-24191	28729	302.64
208	225.0	-19408	-11729	28729	335.90
51	1840.9	35653	882	28849	178.25
497	125.5	35398	4341	28908	171.36
153	373.7	-22215	134	29034	0.26
172	322.6	-18927	13604	29118	27.85
122	1061.4	4128	-28994	29118	275.30
491	207.7	35460	-5348	29137	190.58
56	816.9	35737	3732	29159	172.65
47	5376.3	33965	-10736	29192	201.58
143	1187.4	-22259	2993	29230	5.88
205	118.7	-18495	-14902	29373	329.51
211	82.6	-21386	-8285	29395	343.63
498	128.6	36242	2177	29505	175.77
223	124.7	-22666	-1967	29550	356.18
222	162.7	-22841	-519	29663	359.00
138	782.4	-22856	-245	29675	359.53
212	64.2	-22492	-5192	29766	349.95
224	57.5	-22956	-1912	29836	356.33
207	112.5	-21810	-8596	29891	343.29
495	167.1	36740	1952	29985	176.27
548	126.6	37243	1352	30455	177.45
232	416.9	-12358	-23722	30503	308.95

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY RANGE

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
204	173.8	-19520	-15528	30575	329.48
395	327.1	-268	29852	30681	76.65
141	654.7	-23923	707	30749	1.32
123	2231.7	5082	-30731	30780	273.23
610	202.5	26780	23478	30817	130.37
308	1145.9	-1881	-29577	30830	286.39
621	113.7	37639	1095	30841	177.97
105	290.7	37411	-4287	30892	187.98
206	64.6	-21040	-13468	30943	334.20
203	289.3	-17095	-19729	31001	320.48
499	116.7	37950	2074	31201	176.19
215	115.2	-24301	2646	31231	4.86
142	430.4	-24421	-482	31242	359.12
510	70.1	36087	11211	31342	159.04
309	191.0	-1290	-30302	31368	284.98
111	677.6	32628	-17952	31440	214.82
501	140.1	38239	1397	31452	177.45
506	90.1	37159	9030	31657	163.43
311	2036.6	145	-31009	31719	282.14
106	976.2	38481	-3271	31832	185.90
520	200.7	38782	-1419	31995	182.54
519	826.6	38830	-1541	32050	182.76
124	502.6	5588	-32056	32079	272.20
500	161.7	38898	1906	32137	176.60
521	695.1	38889	-2232	32148	183.98
214	45.2	-25445	-765	32272	358.64
522	275.8	39059	-1825	32293	183.24
202	60.5	-16498	-22414	32342	316.13
68	392.9	38334	-7604	32420	193.56
505	338.6	38632	6623	32496	168.24
213	77.8	-25714	-2797	32652	355.09
507	128.8	38497	9321	33022	163.60
59	1240.6	39676	3388	33032	174.11
69	225.6	39317	-6152	33077	190.72
80	243.1	37509	-12423	33110	202.04
312	281.5	3081	-32908	33119	276.48
523	160.4	40253	355	33437	179.39
64	671.2	40109	3866	33515	173.38
70	255.6	39808	-6469	33619	191.09
107	353.3	40156	-4451	33634	187.61
152	131.9	-26952	221	33771	0.38

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY RANGE

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
216	62.8	-26538	5936	33881	10.09
144	653.1	-27063	150	33881	0.25
157	882.3	-24597	12709	33889	22.03
503	151.1	40778	3558	34146	174.02
524	198.6	41269	1764	34496	177.07
502	251.7	41152	3567	34519	174.07
217	90.3	-26031	10858	34597	18.29
219	99.1	-23713	16694	34797	28.67
197	84.0	-27739	-5845	35048	350.40
310	243.4	-1328	-34094	35054	283.44
504	367.5	41665	4800	35176	172.16
110	319.2	37838	-16625	35194	208.19
146	306.2	-27633	-7336	35224	347.98
194	198.2	-23489	-18142	35322	329.10
511	139.1	42087	2376	35349	176.15
145	323.4	-28632	-874	35460	358.59
108	1143.4	42317	-3070	35631	184.94
508	392.8	40052	12889	35646	158.80
71	388.6	42498	-6081	36195	189.67
63	1190.6	43045	2610	36321	175.88
563	161.3	43074	2553	36346	175.97
558	316.3	42884	-5569	36493	188.78
193	108.6	-24719	-18571	36599	329.51
313	220.5	3764	-36494	36621	274.78
512	231.0	43363	3281	36692	174.87
196	108.0	-28502	-10187	36760	343.91
559	62.7	43564	-4817	37060	187.47
560	517.1	43836	-3598	37192	185.55
513	122.8	44036	3269	37361	174.98
561	72.2	44152	-3040	37458	184.66
514	127.1	44266	1812	37491	177.23
151	133.7	-30656	-2458	37554	356.25
516	81.1	44468	-69	37650	180.10
79	685.6	41979	-13636	37713	201.20
171	130.7	-15734	30242	37725	53.29
562	324.2	44469	-3109	37779	184.72
509	139.6	43781	8253	37873	167.41
515	150.5	44712	-629	37899	180.95
62	1719.5	45058	557	38244	179.17
518	137.7	45448	-4727	38918	186.98
564	798.1	45042	7816	39015	168.44

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY RANGE

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
72	660.8	45098	-8286	39167	192.21
150	169.7	-32562	-2606	39467	356.21
517	230.5	46524	-1893	39751	182.73
109	355.6	46725	-1416	39932	182.03
543	534.3	46637	6380	40327	170.90
198	135.8	-32708	-8133	40354	348.37
148	699.9	-33140	-5815	40379	351.72
533	127.0	46776	5861	40385	171.66
218	108.8	-32427	9761	40440	13.97
566	153.4	47470	4159	40864	174.16
147	661.2	-32728	-10430	40898	345.23
195	529.5	-30158	-18122	41178	333.89
75	603.1	45674	-14000	41301	199.81
567	154.5	48585	2184	41824	177.01
568	117.4	48702	1525	41912	177.91
565	619.0	48359	5719	41933	172.16
569	137.4	49361	-5142	42853	186.89
74	766.8	48573	-11539	43321	195.45
73	272.1	50558	-6152	44171	188.01
570	230.9	50405	-8390	44387	190.89
525	370.6	51419	-1987	44645	182.55
61	1270.7	51540	2268	44780	177.10
571	185.8	51104	-7596	44933	189.73
201	97.9	-35025	-16597	45014	338.36
530	173.6	51655	4862	45100	173.81
76	720.7	48455	-17620	45212	202.94
199	92.4	-37671	-8990	45388	348.58
531	178.3	52207	5443	45714	173.16
526	317.5	52701	-3536	46019	184.41
540	111.0	53061	-4802	46492	185.93
532	413.4	53055	5328	46543	173.43
537	224.3	53210	4206	46582	174.82
192	274.2	-28210	-31255	46945	318.26
539	112.0	53800	2112	47030	177.43
535	154.3	53425	6756	47095	171.75
538	143.5	53763	4266	47138	174.81
527	356.8	54098	-1645	47309	181.99
200	188.4	-38160	-15487	47570	341.00
180	698.9	-40780	-319	47599	359.62
430	134.4	-33001	26378	47763	33.52
177	340.0	-40767	-4831	47830	354.20

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY RANGE

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
112	150.7	37597	-36695	47894	230.01
77	814.5	51433	-17959	48094	201.93
529	181.6	54944	1391	48146	178.34
40	11893.2	54836	-4186	48200	184.98
78	189.6	50479	-20494	48232	205.15
528	181.2	55043	1346	48244	178.40
179	125.5	-41082	-6563	48347	352.20
181	88.6	-42267	20	49085	0.02
572	131.7	55112	-8799	49089	190.33
182	131.8	-41535	-10056	49388	348.25
396	571.8	10549	49472	49612	94.31
60	1624.6	56631	-435	49815	180.50
431	44.5	-38939	20350	50078	23.98
113	176.7	39135	-38927	50593	230.30
536	298.8	56670	9495	50748	169.22
186	261.5	-41156	-18901	51563	338.50
178	666.1	-44426	-6050	51600	353.27
546	293.4	58775	-10065	52923	190.96
545	215.5	58820	-10171	52987	191.07
541	339.3	59860	-307	53043	180.33
544	319.4	58988	-10113	53141	190.97
42	527.7	59895	3403	53186	176.33
574	123.1	61169	-1239	54365	181.31
183	191.8	-45952	-13318	54424	345.84
573	113.7	61174	-2741	54425	182.89
547	127.4	60540	-9411	54540	189.94
397	269.1	9086	54596	54643	92.38
632	319.9	55661	-25656	55171	207.71
185	81.5	-45790	-18066	55624	341.05
184	197.9	-45805	-18053	55634	341.07
41	3845.2	62634	1103	55827	178.87
581	229.2	62924	2690	56170	177.25
542	307.7	62675	-7754	56393	187.90
114	497.8	46877	-40053	56648	225.00
583	215.0	62652	14555	57700	165.39
575	793.8	64743	-6454	58284	186.36
633	326.2	64662	-12076	59092	191.79
577	99.1	66292	-4249	59625	184.09
576	226.0	66516	-7224	60134	186.90
115	172.7	46041	-45954	60417	229.52
582	4525.7	67411	14840	62384	166.24

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY RANGE

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
118	751.2	24153	-60944	63362	254.12
578	275.8	70423	-1443	63621	181.30
579	321.2	71524	-683	64710	180.60
421	160.2	-56027	15545	64739	13.89
117	694.8	26044	-62264	65164	252.84
116	231.1	52530	-46784	65409	225.66
580	1723.2	72407	-1864	65615	181.63
585	693.0	73699	5336	67094	175.44
191	757.6	-46092	-44150	68910	320.16
428	112.8	-52538	35008	68911	30.53
631	145.5	60159	-45067	69831	220.19
420	145.1	-61871	-14311	70164	348.23
187	153.1	-58292	-26688	70367	337.71
189	63.9	-54532	-35415	70838	330.00
641	76.8	78019	5752	71433	175.38
584	1188.5	77608	11089	71653	171.10
190	297.9	-53241	-40112	72222	326.26
634	129.9	77741	-16092	72725	192.78
417	69.2	-66760	6017	73823	4.67
635	144.1	80409	-16088	75329	192.33
429	83.7	-67991	11561	75697	8.78
423	324.1	-70847	15724	79241	11.45
20	1164.4	68347	-50572	79646	219.42
587	467.1	85444	14027	79868	169.88
586	1124.2	85553	14020	79974	169.90
590	6137.4	87194	1410	80389	178.99
418	604.9	-73703	1722	80540	1.23
588	388.2	86462	13556	80789	170.34
9	80.8	-73463	-20014	82739	346.00
422	273.9	-73531	20466	82915	14.29
589	209.1	89979	12699	84125	171.32
636	190.3	91919	-5827	85300	183.92
591	404.7	92780	-6204	86185	184.13
19	199.7	57974	-70039	86731	233.86
119	619.8	79924	-51045	89163	214.92
630	69.0	76582	-56624	89851	219.06
18	391.2	38150	-84270	89906	249.60
642	89.9	-78326	32074	90985	20.64
419	254.0	-84781	10143	92159	6.32
640	88.8	98124	-20639	93609	192.74
120	216.9	85515	-52611	94663	213.76

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY RANGE

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
8	1065.7	-88416	6874	95482	4.13
592	650.0	102595	-4782	95896	182.86
593	376.1	104289	483	97473	179.72
426	139.1	-79254	46143	97660	28.20
427	241.0	-76245	52535	98283	32.31
629	414.0	82501	-65424	100041	220.84
424	394.1	-86938	47729	105206	26.98
622	89.8	112002	7404	105444	175.97
639	451.1	111426	-13341	105455	187.27
638	1153.7	113217	-9345	106809	185.02
637	97.2	113372	-9088	106941	184.87
17	96.1	51817	-98572	108358	245.46
594	5311.1	115633	-2433	108842	181.28
606	106.6	112234	-28782	109275	195.27
7	390.4	-105051	6666	112068	3.41
605	88.0	115988	-26062	112238	193.43
595	700.6	119016	-10231	112663	185.21
425	139.4	-95569	47411	112831	24.85
597	121.0	121940	-1483	115131	180.74
628	190.1	96446	-72362	115194	218.92
604	78.9	119183	-25756	115279	192.91
596	265.0	123853	-9790	117444	184.78
643	171.5	-112803	31480	123694	14.74
10	181.1	-113970	-38244	126697	342.43
627	193.3	123347	-61335	131685	207.76
4	78.6	-98801	80882	133031	37.44
603	66.4	138672	-18348	133124	187.92
16	51.0	49616	-129429	136321	251.70
6	192.2	-126575	29731	136666	12.57
598	168.7	144747	5683	138046	177.64
602	103.1	145780	-14788	139746	186.07
599	4408.9	148084	4829	141349	178.04
5	195.9	-128325	44547	142296	18.24
3	67.3	-111077	82334	143799	34.93
644	50.4	-133352	36057	144734	14.43
623	74.1	148165	49925	149905	160.55
624	73.6	149046	50534	150938	160.44
601	518.5	159725	3019	152973	178.87
600	52.3	160228	535	153411	179.80
645	281.1	-147539	35648	158420	13.00
625	340.6	162663	47263	162854	163.13

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY RANGE

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
2	219.6	-123266	100058	164114	37.57
646	139.4	-157246	38657	168557	13.26
626	101.5	175527	6283	168826	177.87
11	206.0	-136402	-94728	171713	326.52
12	141.9	-132974	-106186	175549	322.78
13	164.9	-140974	-120698	190815	320.76
15	119.0	-184455	-61291	200853	342.23
14	173.3	-187268	-60409	203270	342.71
	289971.2				

2.7 SORTED BY AZIMUTH

The database from Subsection 2.4 was sorted by azimuth from 0 to 360 deg to produce the data presented in this subsection.

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY AZIMUTH

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
181	88.6	-42267	20	49085	0.02
144	653.1	-27063	150	33881	0.25
153	373.7	-22215	134	29034	0.26
152	131.9	-26952	221	33771	0.38
221	66.5	-20458	351	27278	0.74
154	432.8	-18423	358	25244	0.81
418	604.9	-73703	1722	80540	1.23
141	654.7	-23923	707	30749	1.32
176	116.8	-21168	773	27997	1.58
155	180.6	-18114	1103	24956	2.53
220	104.9	-21390	1257	28236	2.55
7	390.4	-105051	6666	112068	3.41
251	196.4	-15127	1316	21984	3.43
8	1065.7	-88416	6874	95482	4.13
256	120.8	-13017	1434	19886	4.14
252	83.1	-14786	1600	21663	4.23
417	69.2	-66760	6017	73823	4.67
402	269.5	-2801	810	9653	4.81
215	115.2	-24301	2646	31231	4.86
454	99.5	-10041	1607	16935	5.45
455	46.7	-10639	1704	17540	5.57
143	1187.4	-22259	2993	29230	5.88
399	130.6	-6441	1381	13331	5.94
419	254.0	-84781	10143	92159	6.32
398	146.9	-6559	1523	13463	6.50
175	107.3	-20478	3441	27512	7.18
456	44.6	-11752	2460	18732	7.55
401	357.3	-3387	1384	10298	7.72
262	110.7	-10559	2467	17551	8.08
269	386.2	-4169	1630	11107	8.44
263	128.0	-10319	2571	17329	8.53
400	103.9	-4139	1654	11081	8.58
156	681.1	-18322	3830	25430	8.66
429	83.7	-67991	11561	75697	8.78
261	88.9	-10706	2731	17735	8.86
453	49.5	-7749	2340	14754	9.13
416	198.8	-18619	4160	25775	9.29
254	219.7	-15377	3698	22501	9.46
162	426.7	-6091	2214	13098	9.73
253	142.7	-15230	3801	22373	9.78
216	62.8	-26538	5936	33881	10.09

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY AZIMUTH

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
448	58.6	-7414	2571	14462	10.24
174	118.5	-19923	5097	27223	10.79
423	324.1	-70847	15724	79241	11.45
6	192.2	-126575	29731	136666	12.57
645	281.1	-147539	35648	158420	13.00
646	139.4	-157246	38657	168557	13.26
452	62.1	-7145	3327	14354	13.40
450	60.5	-6357	3153	13547	13.46
264	87.5	-8329	3643	15579	13.53
421	160.2	-56027	15545	64739	13.89
218	108.8	-32427	9761	40440	13.97
451	89.6	-7022	3501	14276	14.19
422	273.9	-73531	20466	82915	14.29
255	231.1	-13982	5347	21476	14.42
644	50.4	-133352	36057	144734	14.43
643	171.5	-112803	31480	123694	14.74
449	137.2	-5607	3288	12853	14.82
173	365.7	-18849	8149	26930	17.61
5	195.9	-128325	44547	142296	18.24
217	90.3	-26031	10858	34597	18.29
266	118.2	-5726	4218	13235	18.59
642	89.9	-78326	32074	90985	20.64
447	52.0	-6771	5442	14639	21.83
157	882.3	-24597	12709	33889	22.03
446	65.8	-6573	5762	14578	23.28
431	44.5	-38939	20350	50078	23.98
265	86.9	-4785	5229	12727	24.26
164	211.4	-6341	6075	14494	24.78
425	139.4	-95569	47411	112831	24.85
165	155.5	-5489	5772	13594	25.13
471	434.8	-2945	4914	10930	26.72
424	394.1	-86938	47729	105206	26.98
163	1258.9	-7598	7456	16230	27.35
445	69.5	-3998	5691	12222	27.75
172	322.6	-18927	13604	29118	27.85
267	212.7	-4403	5949	12701	27.93
426	139.1	-79254	46143	97660	28.20
219	99.1	-23713	16694	34797	28.67
428	112.8	-52538	35008	68911	30.53
427	241.0	-76245	52535	98283	32.31
430	134.4	-33001	26378	47763	33.52

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY AZIMUTH

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
3	67.3	-111077	82334	143799	34.93
4	78.6	-98801	80882	133031	37.44
2	219.6	-123266	100058	164114	37.57
166	510.2	-5366	9439	15413	37.77
472	117.7	-1976	7001	11241	38.52
168	699.5	-4420	10749	15551	43.73
444	35.5	-2231	9104	12836	45.18
443	32.4	-2677	9694	13569	45.59
442	48.7	-2353	11485	14698	51.39
167	702.9	-3183	12853	16286	52.11
171	130.7	-15734	30242	37725	53.29
441	215.1	-2676	13428	16445	54.74
440	29.0	-3232	15668	18614	57.32
169	290.4	-5894	23152	26413	61.23
432	109.9	-2827	17753	20204	61.49
474	4490.6	2726	7759	8772	62.19
473	59.4	1127	11095	12469	62.85
170	98.6	-3994	21275	23865	63.06
435	41.4	-1394	16189	18152	63.10
434	59.7	-3187	20337	22665	63.80
433	96.3	-2390	20698	22654	66.02
439	44.3	-1379	19204	20881	66.88
388	141.4	-2694	22744	24653	67.30
436	43.2	-278	17324	18721	67.73
437	52.0	130	18429	19605	70.05
387	553.2	-2242	25447	27012	70.40
389	3942.7	-62	20897	22001	71.78
390	186.7	-153	23357	24376	73.38
438	56.7	1393	18406	19189	73.58
534	3020.9	1858	18150	18815	74.71
386	107.5	207	24579	25452	74.95
392	984.5	2384	18668	19187	76.64
395	327.1	-268	29852	30681	76.65
385	422.2	1771	25016	25520	78.59
384	780.2	3643	26305	26496	83.12
394	311.4	5783	14852	14888	86.01
391	1105.0	5262	23815	23866	86.26
393	689.4	5941	16609	16632	86.98
397	269.1	9086	54596	54643	92.38
396	571.8	10549	49472	49612	94.31
610	202.5	26780	23478	30817	130.37

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY AZIMUTH

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
475	116.9	14438	7534	10716	135.32
476	70.4	16712	8257	12887	140.15
28	527.4	27827	13017	24715	148.22
32	108.8	18154	6947	13295	148.50
27	1125.1	28374	12433	24885	150.02
25	70.3	18288	5428	12690	154.67
612	120.7	29007	10028	24350	155.68
22	140.3	17717	4647	11848	156.91
24	79.2	18804	4938	12964	157.61
21	251.5	18188	4510	12231	158.36
508	392.8	40052	12889	35646	158.80
510	70.1	36087	11211	31342	159.04
23	102.4	18484	4386	12464	159.39
624	73.6	149046	50534	150938	160.44
623	74.1	148165	49925	149905	160.55
485	108.0	24346	5897	18494	161.40
620	70.6	29945	7391	24279	162.28
625	340.6	162663	47263	162854	163.13
506	90.1	37159	9030	31657	163.43
26	163.1	21273	4275	15074	163.53
507	128.8	38497	9321	33022	163.60
43	7661.9	34523	7459	28692	164.93
583	215.0	62652	14555	57700	165.39
33	110.5	18815	2961	12357	166.13
582	4525.7	67411	14840	62384	166.24
619	71.9	29286	5500	23131	166.25
29	315.1	21202	3423	14785	166.61
611	139.6	31318	5805	25178	166.67
31	208.4	18773	2721	12261	167.18
57	791.0	32122	5650	25928	167.41
509	139.6	43781	8253	37873	167.41
505	338.6	38632	6623	32496	168.24
564	798.1	45042	7816	39015	168.44
536	298.8	56670	9495	50748	169.22
30	283.4	21023	2684	14456	169.30
382	256.2	27110	3746	20635	169.54
555	79.8	25701	3485	19202	169.54
587	467.1	85444	14027	79868	169.88
586	1124.2	85553	14020	79974	169.90
618	165.9	27923	3601	21410	170.32
588	388.2	86462	13556	80789	170.34

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY AZIMUTH

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
543	534.3	46637	6380	40327	170.90
95	799.1	24203	2748	17600	171.02
381	136.0	25003	2873	18410	171.02
380	197.6	23442	2625	16830	171.03
584	1188.5	77608	11089	71653	171.10
55	550.1	32144	3929	25629	171.18
589	209.1	89979	12699	84125	171.32
497	125.5	35398	4341	28908	171.36
98	200.1	33024	3871	26490	171.60
533	127.0	46776	5861	40385	171.66
535	154.3	53425	6756	47095	171.75
496	197.3	35104	4027	28572	171.90
504	367.5	41665	4800	35176	172.16
565	619.0	48359	5719	41933	172.16
44	2079.4	34175	3677	27603	172.34
56	816.9	35737	3732	29159	172.65
96	3575.4	19236	1545	12514	172.91
531	178.3	52207	5443	45714	173.16
64	671.2	40109	3866	33515	173.38
532	413.4	53055	5328	46543	173.43
530	173.6	51655	4862	45100	173.81
373	217.9	31830	2682	25156	173.88
58	461.5	34896	2965	28234	173.97
503	151.1	40778	3558	34146	174.02
502	251.7	41152	3567	34519	174.07
480	100.1	22899	1670	16167	174.07
59	1240.6	39676	3388	33032	174.11
566	153.4	47470	4159	40864	174.16
383	153.7	22126	1515	15383	174.35
379	166.3	23019	1508	16271	174.68
538	143.5	53763	4266	47138	174.81
537	224.3	53210	4206	46582	174.82
512	231.0	43363	3281	36692	174.87
513	122.8	44036	3269	37361	174.98
374	375.6	29241	1908	22504	175.14
97	353.9	35171	2334	28449	175.29
550	101.0	33625	2186	26896	175.34
641	76.8	78019	5752	71433	175.38
549	106.2	34663	2241	27935	175.40
585	693.0	73699	5336	67094	175.44
553	184.2	30282	1748	23529	175.74

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY AZIMUTH

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
551	117.4	33104	1958	26359	175.74
498	128.6	36242	2177	29505	175.77
552	78.0	32229	1875	25481	175.78
63	1190.6	43045	2610	36321	175.88
563	161.3	43074	2553	36346	175.97
622	89.8	112002	7404	105444	175.97
511	139.1	42087	2376	35349	176.15
94	3082.6	20960	948	14174	176.16
499	116.7	37950	2074	31201	176.19
495	167.1	36740	1952	29985	176.27
99	175.3	26982	1294	20206	176.33
42	527.7	59895	3403	53186	176.33
371	428.6	34901	1733	28136	176.47
500	161.7	38898	1906	32137	176.60
482	109.8	23594	984	16805	176.64
478	86.1	21065	827	14271	176.68
477	143.2	20686	801	13892	176.69
45	2558.6	31093	1323	24311	176.88
554	158.8	26874	1051	20083	177.00
567	154.5	48585	2184	41824	177.01
377	239.8	25085	955	18291	177.01
50	1467.6	33932	1407	27150	177.03
46	1776.2	30756	1241	23970	177.03
524	198.6	41269	1764	34496	177.07
61	1270.7	51540	2268	44780	177.10
514	127.1	44266	1812	37491	177.23
581	229.2	62924	2690	56170	177.25
539	112.0	53800	2112	47030	177.43
501	140.1	38239	1397	31452	177.45
548	126.6	37243	1352	30455	177.45
375	234.9	33504	1129	26710	177.58
598	168.7	144747	5683	138046	177.64
376	120.9	33222	1046	26425	177.73
626	101.5	175527	6283	168826	177.87
568	117.4	48702	1525	41912	177.91
621	113.7	37639	1095	30841	177.97
599	4408.9	148084	4829	141349	178.04
614	103.1	34369	859	27564	178.21
51	1840.9	35653	882	28849	178.25
372	205.1	34427	799	27621	178.34
529	181.6	54944	1391	48146	178.34

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY AZIMUTH

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
528	181.2	55043	1346	48244	178.40
481	96.0	24215	404	17401	178.67
494	134.9	34991	595	28179	178.79
41	3845.2	62634	1103	55827	178.87
601	518.5	159725	3019	152973	178.87
590	6137.4	87194	1410	80389	178.99
615	81.0	33052	451	26238	179.01
378	165.4	24848	306	18033	179.03
62	1719.5	45058	557	38244	179.17
617	113.9	27520	236	20703	179.35
523	160.4	40253	355	33437	179.39
593	376.1	104289	483	97473	179.72
479	131.7	21353	56	14535	179.78
600	52.3	160228	535	153411	179.80
516	81.1	44468	-69	37650	180.10
54	388.7	34740	-150	27923	180.31
541	339.3	59860	-307	53043	180.33
60	1624.6	56631	-435	49815	180.50
579	521.2	71524	-683	64710	180.60
616	99.6	31283	-291	24467	180.68
597	121.0	121940	-1483	115131	180.74
65	260.2	33733	-400	26918	180.85
515	150.5	44712	-629	37899	180.95
483	117.9	24303	-302	17488	180.99
53	885.0	33724	-505	26911	181.08
594	5311.1	115633	-2433	108842	181.28
578	275.8	70423	-1443	63621	181.30
574	123.1	61169	-1239	54365	181.31
580	1723.2	72407	-1864	65615	181.63
527	356.8	54098	-1645	47309	181.99
109	355.6	46725	-1416	39932	182.03
100	482.3	24886	-706	18082	182.24
52	1820.4	34520	-1095	27723	182.26
556	142.9	31495	-1017	24698	182.36
520	200.7	38782	-1419	31995	182.54
525	370.6	51419	-1987	44645	182.55
517	230.5	46524	-1893	39751	182.73
519	826.6	38830	-1541	32050	182.76
557	171.9	31877	-1220	25088	182.79
493	115.0	34385	-1347	27600	182.80
592	650.0	102595	-4782	95896	182.86

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY AZIMUTH

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
573	113.7	61174	-2741	54425	182.89
613	119.1	33289	-1375	26506	182.97
492	143.7	34402	-1505	27625	183.12
522	275.8	39059	-1825	32293	183.24
636	190.3	91919	-5827	85300	183.92
521	695.1	38889	-2232	32148	183.98
577	99.1	66292	-4249	59625	184.09
591	404.7	92780	-6204	86185	184.13
526	317.5	52701	-3536	46019	184.41
93	831.8	21425	-1136	14651	184.45
561	72.2	44152	-3040	37458	184.66
562	324.2	44469	-3109	37779	184.72
596	265.0	123853	-9790	117444	184.78
637	97.2	113372	-9088	106941	184.87
108	1143.4	42317	-3070	35631	184.94
40	11893.2	54836	-4186	48200	184.98
638	1153.7	113217	-9345	106809	185.02
595	700.6	119016	-10231	112663	185.21
560	517.1	43836	-3598	37192	185.55
106	976.2	38481	-3271	31832	185.90
540	111.0	53061	-4802	46492	185.93
602	103.1	145780	-14788	139746	186.07
92	666.0	21549	-1591	14817	186.16
89	1108.5	22184	-1705	15460	186.33
575	793.8	64743	-6454	58284	186.36
569	137.4	49361	-5142	42853	186.89
576	226.0	66516	-7224	60134	186.90
518	137.7	45448	-4727	38918	186.98
639	451.1	111426	-13341	105455	187.27
559	62.7	43564	-4817	37060	187.47
107	353.3	40156	-4451	33634	187.61
542	307.7	62675	-7754	56393	187.90
603	66.4	138672	-18348	133124	187.92
484	155.2	27565	-2902	20949	187.96
105	290.7	37411	-4287	30892	187.98
73	272.1	50558	-6152	44171	188.01
490	90.0	30931	-3510	24367	188.28
365	174.5	20566	-2104	13908	188.70
558	316.3	42884	-5569	36493	188.78
66	580.1	33619	-4264	27138	189.04
367	141.2	24725	-2864	18134	189.09

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CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY AZIMUTH

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
91	637.8	20748	-2272	14114	189.26
71	388.6	42498	-6081	36195	189.67
366	132.7	25718	-3222	19172	189.67
571	185.8	51104	-7596	44933	189.73
370	584.8	28470	-3756	21976	189.84
547	127.4	60540	-9411	54540	189.94
88	251.6	23658	-2983	17102	190.04
572	131.7	55112	-8799	49089	190.33
491	207.7	35460	-5348	29137	190.58
369	329.0	27337	-3878	20882	190.70
69	225.6	39317	-6152	33077	190.72
570	230.9	50405	-8390	44387	190.89
546	293.4	58775	-10065	52923	190.96
544	319.4	58988	-10113	53141	190.97
545	215.5	58820	-10171	52987	191.07
70	255.6	39808	-6469	33619	191.09
368	135.8	23329	-3258	16830	191.16
487	139.5	31606	-4897	25267	191.18
67	174.6	34932	-5732	28692	191.52
486	162.6	28335	-4411	21965	191.58
633	326.2	64662	-12076	59092	191.79
90	1085.1	21228	-3070	14733	192.03
72	660.8	45098	-8286	39167	192.21
635	144.1	80409	-16088	75329	192.33
640	88.8	98124	-20639	93609	192.74
634	129.9	77741	-16092	72725	192.78
604	78.9	119183	-25756	115279	192.91
605	88.0	115988	-26062	112238	193.43
102	182.3	22210	-3707	15832	193.54
68	392.9	38334	-7604	32420	193.56
101	416.2	20980	-3639	14622	194.41
489	103.9	31306	-6294	25284	194.41
488	113.9	32449	-6821	26523	194.90
606	106.6	112234	-28782	109275	195.27
74	766.8	48573	-11539	43321	195.45
48	433.5	26596	-6152	20713	197.28
82	314.2	31738	-7909	26145	197.61
49	961.8	22796	-5106	16774	197.72
364	230.1	20028	-4262	13880	197.88
104	192.7	28117	-7253	22500	198.80
87	439.8	24333	-6219	18587	199.55

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CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY AZIMUTH

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
75	603.1	45674	-14000	41301	199.81
83	1319.2	27715	-7536	22214	199.83
85	1101.2	27727	-8081	22416	201.13
79	685.6	41979	-13636	37713	201.20
47	5376.3	33965	-10736	29192	201.58
77	814.5	51433	-17959	48094	201.93
80	243.1	37509	-12423	33110	202.04
84	1548.1	27465	-8472	22317	202.31
76	720.7	48455	-17620	45212	202.94
81	523.7	31988	-11069	27496	203.74
103	1404.9	19369	-5813	13832	204.85
78	189.6	50479	-20494	48232	205.15
632	319.9	55661	-25656	55171	207.71
627	193.3	123347	-61335	131685	207.76
110	319.2	37838	-16625	35194	208.19
86	981.8	23071	-9121	18637	209.30
120	216.9	85515	-52611	94663	213.76
111	677.6	32628	-17952	31440	214.82
119	619.8	79924	-51045	89163	214.92
628	190.1	96446	-72362	115194	218.92
630	69.0	76582	-56624	89851	219.06
20	1164.4	68347	-50572	79646	219.42
631	145.5	60159	-45067	69831	220.19
629	414.0	82501	-65424	100041	220.84
114	497.8	46877	-40053	56648	225.00
116	231.1	52530	-46784	65409	225.66
360	231.5	14025	-8441	11099	229.51
115	172.7	46041	-45954	60417	229.52
112	150.7	37597	-36695	47894	230.01
113	176.7	39135	-38927	50593	230.30
363	169.5	19828	-15723	20408	230.39
19	199.7	57974	-70039	86731	233.86
361	183.1	15224	-12043	14686	235.09
362	178.6	14124	-12992	14905	240.65
357	148.2	12958	-11858	13354	242.63
17	96.1	51817	-98572	108358	245.46
18	391.2	38150	-84270	89906	249.60
359	162.1	10170	-9732	10293	250.99
358	267.1	10027	-9685	10203	251.67
16	51.0	49616	-129429	136321	251.70
117	694.8	26044	-62264	65164	252.84

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY AZIMUTH

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
118	751.2	24153	-60944	63362	254.12
350	297.6	9415	-10718	11028	256.38
349	691.4	9054	-9933	10182	257.31
351	194.2	9161	-12689	12903	259.54
126	217.2	10660	-22178	22508	260.17
352	214.3	8789	-12745	12897	261.21
341	495.9	8373	-10072	10191	261.22
348	205.0	8459	-10805	10928	261.37
353	5669.9	8941	-23849	23944	264.91
346	702.6	7535	-10906	10930	266.24
345	154.6	7405	-11425	11440	267.06
342	288.4	7346	-11454	11466	267.36
344	1354.5	7268	-12013	12022	267.86
343	224.6	7004	-11092	11093	269.04
125	689.0	6830	-25111	25111	269.97
354	120.2	6280	-26483	26488	271.16
355	127.5	6178	-26764	26772	271.37
339	268.1	6578	-8351	8355	271.64
356	190.7	6029	-24496	24508	271.85
124	502.6	5588	-32056	32079	272.20
338	98.2	6388	-9052	9062	272.72
123	2231.7	5082	-30731	30780	273.23
347	183.8	6144	-10634	10655	273.63
340	272.4	6257	-7813	7833	274.11
332	741.9	5065	-22977	23044	274.36
313	220.5	3764	-36494	36621	274.78
122	1061.4	4128	-28994	29118	275.30
337	156.7	5875	-9656	9702	275.58
312	281.5	3081	-32908	33119	276.48
328	207.0	4334	-21714	21856	276.53
325	125.9	4315	-21375	21521	276.68
326	651.4	4072	-20936	21115	277.47
333	158.2	5045	-12703	12827	277.94
319	156.2	3099	-26004	26269	278.14
322	386.6	3594	-22303	22535	278.22
121	7248.4	2834	-26827	27121	278.45
323	127.2	3247	-23377	23649	278.68
314	152.8	2594	-25151	25503	279.53
320	274.9	2882	-23092	23425	279.67
321	450.4	2833	-22765	23111	279.93
334	220.9	4627	-12216	12411	280.17

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CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY AZIMUTH

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
318	124.4	1548	-24867	25419	281.97
311	2036.6	145	-31009	31719	282.14
317	298.8	1584	-23235	23817	282.69
310	243.4	-1328	-34094	35054	283.44
315	231.8	384	-26906	27664	283.45
316	403.6	1224	-23392	24052	283.45
331	306.2	3341	-13343	13789	284.61
128	829.9	1177	-21125	21865	284.95
309	191.0	-1290	-30302	31368	284.98
330	181.6	2994	-13173	13717	286.19
303	142.6	118	-22978	23934	286.26
304	125.5	-24	-23399	24379	286.30
329	264.8	2884	-13430	13994	286.32
308	1145.9	-1881	-29577	30830	286.39
305	449.1	-302	-23285	24349	287.00
336	129.8	3808	-9586	10047	287.43
302	124.4	-457	-22852	23982	287.66
335	1112.6	3818	-9395	9862	287.71
301	275.4	-584	-23071	24230	287.79
300	755.4	-828	-22399	23668	288.85
307	299.5	-2786	-26880	28544	289.66
306	2372.3	-2074	-23100	24752	291.05
299	609.5	-1713	-21825	23433	291.35
127	518.4	-1542	-18693	20477	294.10
298	245.6	-3041	-20873	23084	295.28
235	105.5	-6663	-25237	28612	298.11
233	75.5	-8679	-24191	28729	302.64
297	73.1	-6543	-19882	23955	303.90
234	102.8	-8508	-21452	26364	305.54
271	190.8	-7559	-18547	23467	307.78
272	147.9	-7115	-17891	22676	307.91
232	416.9	-12358	-23722	30503	308.95
296	105.3	-6122	-15745	20380	309.41
236	101.8	-9613	-18471	24722	311.66
130	3978.0	-5527	-13222	18089	313.04
231	278.5	-12802	-19787	27866	314.76
202	60.5	-16498	-22414	32342	316.13
237	403.1	-12662	-17454	26156	318.14
192	274.2	-28210	-31255	46945	318.26
238	179.2	-13384	-17268	26577	319.48
274	163.0	-7049	-11689	18136	319.87

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CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY AZIMUTH

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
191	757.6	-46092	-44150	68910	320.16
203	289.3	-17095	-19729	31001	320.48
13	164.9	-140974	-120698	190815	320.76
273	184.5	-7485	-11611	18423	320.93
240	176.4	-14440	-16316	26797	322.49
12	141.9	-132974	-106186	175549	322.78
131	354.0	-10098	-12430	20992	323.69
275	181.0	-8036	-10752	18337	324.10
230	124.4	-16144	-15778	27860	325.51
246	71.8	-12715	-13150	23547	326.05
190	297.9	-53241	-40112	72222	326.26
11	206.0	-136402	-94728	171713	326.52
292	435.0	-5377	-7678	14411	327.81
413	224.5	-5380	-7642	14394	327.93
414	232.5	-2832	-5986	11356	328.19
194	198.2	-23489	-18142	35322	329.10
204	173.8	-19520	-15528	30575	329.48
193	108.6	-24719	-18571	36599	329.51
205	118.7	-18495	-14902	29373	329.51
229	818.0	-16522	-13706	27067	329.58
189	63.9	-54532	-35415	70838	330.00
412	111.9	-6957	-7798	15829	330.48
241	55.5	-15559	-12510	25637	330.79
294	383.0	-6904	-7562	15667	331.14
411	270.5	-6884	-7517	15629	331.25
415	319.1	-3166	-5244	11277	332.29
295	131.9	-7026	-7260	15632	332.33
290	360.1	-5312	-6072	13565	333.41
195	529.5	-30158	-18122	41178	333.89
206	64.6	-21040	-13468	30943	334.20
276	595.2	-9348	-7762	17933	334.35
228	171.8	-16594	-11215	25959	334.40
245	58.6	-15743	-10550	24906	334.94
208	225.0	-19408	-11729	28729	335.90
289	287.0	-5310	-5361	13260	336.15
279	430.5	-7908	-6432	16070	336.40
277	118.8	-10682	-7300	18962	337.36
187	153.1	-58292	-26688	70367	337.71
464	212.9	-4386	-4543	12090	337.93
201	97.9	-35025	-16597	45014	338.36
186	261.5	-41156	-18901	51563	338.50

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY AZIMUTH

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
280	182.3	-7374	-5525	15230	338.73
278	107.4	-8545	-5783	16415	339.37
465	185.4	-3290	-3794	10797	339.43
244	98.8	-14846	-7825	23034	340.14
209	109.6	-19311	-9005	27637	340.98
200	188.4	-38160	-15487	47570	341.00
185	81.5	-45790	-18066	55624	341.05
466	89.6	-3135	-3415	10522	341.06
184	197.9	-45805	-18053	55634	341.07
132	971.3	-7959	-4869	15558	341.76
243	99.7	-16735	-7581	24743	342.16
15	119.0	-184455	-61291	200853	342.23
10	181.1	-113970	-38244	126697	342.43
210	141.4	-20336	-8478	28447	342.66
14	173.3	-187268	-60409	203270	342.71
227	264.7	-17720	-7442	25642	343.13
207	112.5	-21810	-8596	29891	343.29
211	82.6	-21386	-8285	29395	343.63
196	108.0	-28502	-10187	36760	343.91
282	91.6	-9275	-4532	16719	344.27
283	105.6	-8606	-4332	16021	344.31
468	180.9	-3407	-2861	10618	344.37
410	720.4	-10623	-4860	18106	344.43
147	661.2	-32728	-10430	40898	345.23
183	191.8	-45952	-13318	54424	345.84
9	80.8	-73463	-20014	82739	346.00
134	514.9	-10061	-4047	17357	346.52
286	159.4	-6148	-3052	13320	346.76
407	199.1	-10490	-4024	17770	346.91
226	106.0	-19014	-5989	26517	346.95
242	202.3	-17433	-5251	24813	347.78
288	74.4	-5996	-2740	13104	347.93
408	129.0	-10266	-3641	17467	347.97
146	306.2	-27633	-7336	35224	347.98
287	178.1	-5799	-2675	12897	348.03
136	297.7	-16077	-4839	23401	348.07
284	65.0	-7074	-2897	14191	348.22
420	145.1	-61871	-14311	70164	348.23
182	131.8	-41535	-10056	49388	348.25
198	135.8	-32708	-8133	40354	348.37
248	188.4	-13822	-4198	21062	348.50

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY AZIMUTH

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
463	102.4	-4613	-2311	11662	348.57
199	92.4	-37671	-8990	45388	348.58
469	159.8	-3118	-2007	10137	348.58
285	80.7	-6836	-2730	13925	348.69
247	498.5	-10483	-3366	17625	348.99
409	252.6	-11450	-3495	18599	349.17
133	533.6	-9310	-3043	16412	349.31
212	64.2	-22492	-5192	29766	349.95
197	84.0	-27739	-5845	35048	350.40
135	4676.5	-14873	-3372	21952	351.16
148	699.9	-33140	-5815	40379	351.72
405	168.9	-9091	-2206	16062	352.10
179	125.5	-41082	-6563	48347	352.20
137	868.9	-19273	-3485	26322	352.39
161	441.0	-3793	-1316	10693	352.93
225	61.0	-21378	-3446	28406	353.03
178	666.1	-44426	-6050	51600	353.27
406	127.5	-9587	-1765	16500	353.86
177	340.0	-40767	-4831	47830	354.20
213	77.8	-25714	-2797	32652	355.09
461	99.3	-6669	-1116	13533	355.27
159	429.9	-7512	-1128	14374	355.50
158	2907.5	-13782	-1598	20662	355.56
460	92.7	-6393	-934	13244	355.96
249	163.4	-14505	-1491	21375	356.00
258	137.9	-14500	-1448	21367	356.11
223	124.7	-22666	-1967	29550	356.18
150	169.7	-32562	-2606	39467	356.21
151	133.7	-30656	-2458	37554	356.25
224	57.5	-22956	-1912	29836	356.33
404	121.5	-6979	-845	13823	356.49
403	282.6	-4991	-713	11830	356.54
459	78.2	-9490	-763	16326	357.32
259	93.2	-11777	-821	18613	357.47
462	104.3	-5545	-532	12375	357.54
270	498.6	-3037	-375	9862	357.82
470	143.7	-4066	-380	10891	358.00
160	3869.1	-5604	-432	12430	358.01
145	323.4	-28632	-874	35460	358.59
214	45.2	-25445	-765	32272	358.64
458	75.1	-10413	-403	17236	358.66

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY AZIMUTH

I.D. MARK	WEIGHT (gm)	COORDINATES		FROM GZ:	
		X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (deg)
457	66.5	-10263	-376	17085	358.74
222	162.7	-22841	-519	29663	359.00
142	430.4	-24421	-482	31242	359.12
257	130.0	-14165	-251	20984	359.31
250	139.4	-15146	-230	21965	359.40
138	782.4	-22856	-245	29675	359.53
180	698.9	-40780	-319	47599	359.62
260	88.0	-11401	-59	18219	359.82
	289971.2				

2.8. SORTED BY COLOR

The weight, color, and location information of each piece of PAS-3 debris collected in the circular collection area was first combined into a single database. The database was then sorted by color of concrete.

Color Code:

R = Red

Y = Yellow

B = Black

G = Green

N = Natural (Gray)

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY COLOR OF CONCRETE

I.D. MARK	WEIGHT (gm)	COLOR		COORDINATES		FROM GZ:	
		CONCRETE	BEAD	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (mm)
172	322.6	B		-18927	13604	29118	27.85
182	131.8	B		-41535	-10056	49388	348.25
231	278.5	B		-12802	-19787	27866	314.76
285	80.7	B		-6836	-2730	13925	348.69
333	158.2	B	Y	5045	-12703	12827	277.94
346	702.6	B		7535	-10906	10930	266.24
349	691.4	B	B	9054	-9933	10182	257.31
357	148.2	B		12958	-11858	13354	242.63
448	58.6	B		-7414	2571	14462	10.24
461	99.3	B		-6669	-1116	13533	355.27
113	176.7	B/R	R	39135	-38927	50593	230.30
154	432.8	B/R		-18423	358	25244	0.81
225	61.0	B/R		-21378	-3446	28406	353.03
234	102.8	B/R	G	-8508	-21452	26364	305.54
297	73.1	B/R		-6543	-19882	23955	303.90
424	394.1	B/R		-86938	47729	105206	26.98
426	139.1	B/R		-79254	46143	97660	28.20
627	193.3	B/R	R	123347	-61335	131685	207.76
11	206.0	B/Y		-136402	-94728	171713	326.52
420	145.1	G		-61871	-14311	70164	348.23
9	80.8	N		-73463	-20014	82739	346.00
21	251.5	N		18188	4510	12231	158.36
22	140.3	N		17717	4647	11848	156.91
23	102.4	N		18484	4386	12464	159.39
24	79.2	N		18804	4938	12964	157.61
26	163.1	N		21273	4275	15074	163.53
29	315.1	N		21202	3423	14785	166.61
30	283.4	N		21023	2684	14456	169.30

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY COLOR OF CONCRETE

I.D. MARK	WEIGHT (gm)	COLOR		COORDINATES		FROM GZ:	
		CONCRETE	BEAD	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (mm)
31	208.4	N		18773	2721	12261	167.18
32	108.8	N		18154	6947	13295	148.50
33	110.5	N		18815	2961	12357	166.13
42	527.7	N		59895	3403	53186	176.33
46	1776.2	N		30756	1241	23970	177.03
49	961.8	N		22796	-5106	16774	197.72
50	1467.6	N		33932	1407	27150	177.03
51	1840.9	N		35653	882	28849	178.25
52	1820.4	N		34520	-1095	27723	182.26
53	885.0	N		33724	-505	26911	181.08
54	388.7	N		34740	-150	27923	180.31
55	550.1	N		32144	3929	25629	171.18
56	816.9	N		35737	3732	29159	172.65
57	791.0	N		32122	5650	25928	167.41
58	461.5	N		34896	2965	28234	173.97
59	1240.6	N		39676	3388	33032	174.11
60	1624.6	N		56631	-435	49815	180.50
61	1270.7	N		51540	2268	44780	177.10
62	1719.5	N		45058	557	38244	179.17
63	1190.6	N		43045	2610	36321	175.88
64	671.2	N		40109	3866	33515	173.38
65	260.2	N		33733	-400	26918	180.85
66	580.1	N		33619	-4264	27138	189.04
68	392.9	N		38334	-7604	32420	193.56
70	255.6	N		39808	-6469	33619	191.09
71	388.6	N		42498	-6081	36195	189.67
72	660.8	N		45098	-8286	39167	192.21
73	272.1	N		50558	-6152	44171	188.01

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY COLOR OF CONCRETE

I.D. MARK	WEIGHT (gm)	COLOR		COORDINATES		FROM GZ:	
		CONCRETE	BEAD	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (mm)
74	766.8	N		48573	-11539	43321	195.45
75	603.1	N		45674	-14000	41301	199.81
76	720.7	N		48455	-17620	45212	202.94
77	814.5	N		51433	-17959	48094	201.93
78	189.6	N		50479	-20494	48232	205.15
79	685.6	N		41979	-13636	37713	201.20
80	243.1	N		37509	-12423	33110	202.04
81	523.7	N		31988	-11069	27496	203.74
86	981.8	N		23071	-9121	18637	209.30
87	439.8	N		24333	-6219	18587	199.55
88	251.6	N		23658	-2983	17102	190.04
89	1108.5	N		22184	-1705	15460	186.33
90	1085.1	N		21228	-3070	14733	192.03
92	666.0	N		21549	-1591	14817	186.16
93	831.8	N		21425	-1136	14651	184.45
94	3082.6	N		20960	948	14174	176.16
95	799.1	N		24203	2748	17600	171.02
96	3575.4	N		19236	1545	12514	172.91
97	353.9	N		35171	2334	28449	175.29
98	200.1	N		33024	3871	26490	171.60
99	175.3	N		26982	1294	20206	176.33
100	482.3	N		24886	-706	18082	182.24
101	416.2	N		20980	-3639	14622	194.41
102	182.3	N		22210	-3707	15832	193.54
103	1404.9	N		19369	-5813	13832	204.85
105	290.7	N		37411	-4287	30892	187.98
106	976.2	N		38481	-3271	31832	185.90
108	1143.4	N		42317	-3070	35631	184.94

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY COLOR OF CONCRETE

I.D. MARK	WEIGHT (gm)	COLOR		COORDINATES		FROM GZ:	
		CONCRETE	BEAD	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (mm)
109	355.6	N		46725	-1416	39932	182.03
110	319.2	N		37838	-16625	35194	208.19
119	619.8	N		79924	-51045	89163	214.92
132	971.3	N		-7959	-4869	15558	341.76
133	533.6	N		-9310	-3043	16412	349.31
135	4676.5	N		-14873	-3372	21952	351.16
138	782.4	N		-22856	-245	29675	359.53
141	654.7	N		-23923	707	30749	1.32
144	653.1	N		-27063	150	33881	0.25
145	323.4	N		-28632	-874	35460	358.59
146	306.2	N		-27633	-7336	35224	347.98
150	169.7	N		-32562	-2606	39467	356.21
151	133.7	N		-30656	-2458	37554	356.25
152	131.9	N		-26952	221	33771	0.38
153	373.7	N		-22215	134	29034	0.26
156	681.1	N		-18322	3830	25430	8.66
158	2907.5	N		-13782	-1598	20662	355.56
164	211.4	N		-6341	6075	14494	24.78
174	118.5	N		-19923	5097	27223	10.79
175	107.3	N		-20478	3441	27512	7.18
179	125.5	N		-41082	-6563	48347	352.20
180	698.9	N		-40780	-319	47599	359.62
181	88.6	N		-42267	20	49085	0.02
183	191.8	N		-45952	-13318	54424	345.84
187	153.1	N		-58292	-26688	70367	337.71
189	63.9	N		-54532	-35415	70838	330.00
192	274.2	N		-28210	-31255	46945	318.26
193	108.6	N		-24719	-18571	36599	329.51

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY COLOR OF CONCRETE

I.D. MARK	WEIGHT (gm) .	COLOR		COORDINATES		FROM GZ:	
		CONCRETE	BEAD	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (mm)
194	198.2	N		-23489	-18142	35322	329.10
197	84.0	N		-27739	-5845	35048	350.40
198	135.8	N		-32708	-8133	40354	348.37
204	173.8	N		-19520	-15528	30575	329.48
211	82.6	N		-21386	-8285	29395	343.63
215	115.2	N		-24301	2646	31231	4.86
220	104.9	N		-21390	1257	28236	2.55
229	818.0	N		-16522	-13706	27067	329.58
230	124.4	N		-16144	-15778	27860	325.51
242	202.3	N		-17433	-5251	24813	347.78
243	99.7	N		-16735	-7581	24743	342.16
247	498.5	N		-10483	-3366	17625	348.99
248	188.4	N		-13822	-4198	21062	348.50
251	196.4	N		-15127	1316	21984	3.43
253	142.7	N		-15230	3801	22373	9.78
270	498.6	N		-3037	-375	9862	357.82
275	181.0	N		-8036	-10752	18337	324.10
287	178.1	N		-5799	-2675	12897	348.03
289	287.0	N		-5310	-5361	13260	336.15
290	360.1	N		-5312	-6072	13565	333.41
292	435.0	N		-5377	-7678	14411	327.81
296	105.3	N		-6122	-15745	20380	309.41
363	169.5	N		19828	-15723	20408	230.39
364	230.1	N		20028	-4262	13880	197.88
365	174.5	N		20566	-2104	13908	188.70
366	132.7	N		25718	-3222	19172	189.67
367	141.2	N		24725	-2864	18134	189.09
369	329.0	N		27557	-3878	20882	190.70

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY COLOR OF CONCRETE

I.D. MARK	WEIGHT (gm)	COLOR		COORDINATES		FROM GZ:	
		CONCRETE	BEAD	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (mm)
371	428.6	N		34901	1733	28136	176.47
372	205.1	N		34427	799	27621	178.34
373	217.9	N		31830	2682	25156	173.88
375	234.9	N		33504	1129	26710	177.58
376	120.9	N		33222	1046	26425	177.73
377	239.8	N		25085	955	18291	177.01
378	165.4	N		24848	306	18033	179.03
379	166.3	N		23019	1508	16271	174.68
380	197.6	N		23442	2625	16830	171.03
382	256.2	N		27110	3746	20635	169.54
383	153.7	N		22126	1515	15383	174.35
394	311.4	N		5783	14852	14888	86.01
403	282.6	N		-4991	-713	11830	356.54
410	720.4	N		-10623	-4860	18106	344.43
413	224.5	N		-5380	-7642	14394	327.93
423	324.1	N		-70847	15724	79241	11.45
431	44.5	N		-38939	20350	50078	23.98
451	89.6	N		-7022	3501	14276	14.19
454	99.5	N		-10041	1607	16935	5.45
465	185.4	N		-3290	-3794	10797	339.43
468	180.9	N		-3407	-2861	10618	344.37
476	70.4	N		16712	8257	12887	140.15
477	143.2	N		20686	801	13892	176.69
478	86.1	N		21065	827	14271	176.68
479	131.7	N		21353	56	14535	179.78
480	100.1	N		22899	1670	16167	174.07
481	96.0	N		24215	404	17401	178.67
482	109.8	N		23594	984	16805	176.64

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY COLOR OF CONCRETE

I.D. MARK	WEIGHT (gm)	COLOR		COORDINATES		FROM GZ:	
		CONCRETE	BEAD	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (mm)
483	117.9	N		24303	-302	17488	180.99
485	108.0	N		24346	5897	18494	161.40
486	162.6	N		28335	-4411	21965	191.58
487	139.5	N		31606	-4897	25267	191.18
488	113.9	N		32449	-6821	26523	194.90
489	103.9	N		31306	-6294	25284	194.41
490	90.0	N		30931	-3510	24367	188.28
493	115.0	N		34385	-1347	27600	182.80
494	134.9	N		34991	595	28179	178.79
495	167.1	N		36740	1952	29985	176.27
496	197.3	N		35104	4027	28572	171.90
497	125.5	N		35398	4341	28908	171.36
498	128.6	N		36242	2177	29505	175.77
499	116.7	N		37950	2074	31201	176.19
501	140.1	N		38239	1397	31452	177.45
502	251.7	N		41152	3567	34519	174.07
503	151.1	N		40778	3558	34146	174.02
504	367.5	N		41665	4800	35176	172.16
505	338.6	N		38632	6623	32496	168.24
507	128.8	N		38497	9321	33022	163.60
509	139.6	N		43781	8253	37873	167.41
510	70.1	N		36087	11211	31342	159.04
511	139.1	N		42087	2376	35349	176.15
512	231.0	N		43363	3281	36692	174.87
513	122.8	N		44036	3269	37361	174.98
514	127.1	N		44266	1812	37491	177.23
515	150.5	N		44712	-629	37899	180.95
516	81.1	N		44468	-69	37650	180.10

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY COLOR OF CONCRETE

I.D. MARK	WEIGHT (gm)	COLOR		COORDINATES		FROM GZ:	
		CONCRETE	BEAD	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (mm)
517	230.5	N		46524	-1893	39751	182.73
518	137.7	N		45448	-4727	38918	186.98
519	826.6	N		38830	-1541	32050	182.76
520	200.7	N		38782	-1419	31995	182.54
521	695.1	N		38889	-2232	32148	183.98
522	275.8	N		39059	-1825	32293	183.24
523	160.4	N		40253	355	33437	179.39
524	198.6	N		41269	1764	34496	177.07
525	370.6	N		51419	-1987	44645	182.55
526	317.5	N		52701	-3536	46019	184.41
528	181.2	N		55043	1346	48244	178.40
529	181.6	N		54944	1391	48146	178.34
530	173.6	N		51655	4862	45100	173.81
531	178.3	N		52207	5443	45714	173.16
532	413.4	N		53055	5328	46543	173.43
535	154.3	N		53425	6756	47095	171.75
537	224.3	N		53210	4206	46582	174.82
538	143.5	N		53763	4266	47138	174.81
539	112.0	N		53800	2112	47030	177.43
540	111.0	N		53061	-4802	46492	185.93
541	339.3	N		59860	-307	53043	180.33
542	307.7	N		62675	-7754	56393	187.90
543	534.3	N		46637	6380	40327	170.90
544	319.4	N		58988	-10113	53141	190.97
545	215.5	N		58820	-10171	52987	191.07
546	293.4	N		58775	-10065	52923	190.96
547	127.4	N		60540	-9411	54540	189.94
549	106.2	N		34663	2241	27935	175.40

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY COLOR OF CONCRETE

I.D. MARK	WEIGHT (gm)	COLOR		COORDINATES		FROM GZ:	
		CONCRETE	BEAD	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (mm)
550	101.0	N		33625	2186	26896	175.34
551	117.4	N		33104	1958	26359	175.74
552	78.0	N		32229	1875	25481	175.78
553	184.2	N		30282	1748	23529	175.74
554	158.8	N		26874	1051	20083	177.00
555	79.8	N		25701	3485	19202	169.54
556	142.9	N		31495	-1017	24698	182.36
557	171.9	N		31877	-1220	25088	182.79
559	62.7	N		43564	-4817	37060	187.47
562	324.2	N		44469	-3109	37779	184.72
563	161.3	N		43074	2553	36346	175.97
566	153.4	N		47470	4159	40864	174.16
568	117.4	N		48702	1525	41912	177.91
569	137.4	N		49361	-5142	42853	186.89
570	230.9	N		50405	-8390	44387	190.89
571	185.8	N		51104	-7596	44933	189.73
572	131.7	N		55112	-8799	49089	190.33
573	113.7	N		61174	-2741	54425	182.89
575	793.8	N		64743	-6454	58284	186.36
576	226.0	N		66516	-7224	60134	186.90
577	99.1	N		66292	-4249	59625	184.09
578	275.8	N		70423	-1443	63621	181.30
579	321.2	N		71524	-683	64710	180.60
580	1723.2	N		72407	-1864	65615	181.63
581	229.2	N		62924	2690	56170	177.25
584	1188.5	N		77608	11089	71653	171.10
585	693.0	N		73699	5336	67094	175.44
591	404.7	N		92780	-6204	86185	184.13

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CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY COLOR OF CONCRETE

I.D. MARK	WEIGHT (gm)	COLOR		COORDINATES		FROM GZ:	
		CONCRETE	BEAD	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (mm)
592	650.0	N		102595	-4782	95896	182.86
595	700.6	N		119016	-10231	112663	185.21
596	265.0	N		123853	-9790	117444	184.78
598	168.7	N		144747	5683	138046	177.64
599	4408.9	N		148084	4829	141349	178.04
600	52.3	N		160228	535	153411	179.80
601	518.5	N		159725	3019	152973	178.87
602	103.1	N		145780	-14788	139746	186.07
603	66.4	N		138672	-18348	133124	187.92
605	88.0	N		115988	-26062	112238	193.43
606	106.6	N		112234	-28782	109275	195.27
611	139.6	N		31318	5805	25178	166.67
612	120.7	N		29007	10028	24350	155.68
614	103.1	N		34369	859	27564	178.21
615	81.0	N		33052	451	26238	179.01
617	113.9	N		27520	236	20703	179.35
619	71.9	N		29286	5500	23131	166.25
620	70.6	N		29945	7391	24279	162.28
621	113.7	N		37639	1095	30841	177.97
622	89.8	N		112002	7404	105444	175.97
625	340.6	N		162663	47263	162854	163.13
626	101.5	N		175527	6283	168826	177.87
632	319.9	N		55661	-25656	55171	207.71
633	326.2	N		64662	-12076	59092	191.79
636	190.3	N		91919	-5827	85300	183.92
637	97.2	N		113372	-9088	106941	184.87
638	1153.7	N		113217	-9345	106809	185.02
639	451.1	N		111426	-13341	105455	187.27

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CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY COLOR OF CONCRETE

I.D. MARK	WEIGHT (gm)	COLOR		COORDINATES		FROM GZ:	
		CONCRETE	BEAD	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (mm)
640	88.8	N		98124	-20639	93609	192.74
641	76.8	N		78019	5752	71433	175.38
623	74.1	N/B		148165	49925	149905	160.55
624	73.6	N/B		149046	50534	150938	160.44
492	143.7	N/Y	R	34402	-1505	27625	183.12
536	298.8	N/Y	R	56670	9495	50748	169.22
2	219.6	R		-123266	100058	164114	37.57
3	67.3	R		-111077	82334	143799	34.93
5	195.9	R		-128325	44547	142296	18.24
6	192.2	R		-126575	29731	136666	12.57
7	390.4	R		-105051	6666	112068	3.41
12	141.9	R		-132974	-106186	175549	322.78
14	173.3	R		-187268	-60409	203270	342.71
16	51.0	R		49616	-129429	136321	251.70
17	96.1	R	R	51817	-98572	108358	245.46
115	172.7	R	R	46041	-45954	60417	229.52
134	514.9	R		-10061	-4047	17357	346.52
136	297.7	R		-16077	-4839	23401	348.07
142	430.4	R		-24421	-482	31242	359.12
155	180.6	R		-18114	1103	24956	2.53
160	3869.1	R		-5604	-432	12430	358.01
163	1258.9	R		-7598	7456	16230	27.35
165	155.5	R		-5489	5772	13594	25.13
176	116.8	R		-21168	773	27997	1.58
202	60.5	R		-16498	-22414	32342	316.13
203	289.3	R		-17095	-19729	31001	320.48
205	118.7	R		-18495	-14902	29373	329.51
206	64.6	R		-21040	-13468	30943	334.20

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CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY COLOR OF CONCRETE

I.D. MARK	WEIGHT (gm)	COLOR		COORDINATES		FROM GZ:	
		CONCRETE	BEAD	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (mm)
207	112.5	R		-21810	-8596	29891	343.29
208	225.0	R		-19408	-11729	28729	335.90
212	64.2	R		-22492	-5192	29766	349.95
214	45.2	R		-25445	-765	32272	358.64
216	62.8	R		-26538	5936	33881	10.09
217	90.3	R		-26031	10858	34597	18.29
219	99.1	R		-23713	16694	34797	28.67
221	66.5	R		-20458	351	27278	0.74
222	162.7	R		-22841	-519	29663	359.00
224	57.5	R		-22956	-1912	29836	356.33
226	106.0	R		-19014	-5989	26517	346.95
228	171.8	R		-16594	-11215	25959	334.40
237	403.1	R		-12662	-17454	26156	318.14
238	179.2	R		-13384	-17268	26577	319.48
240	176.4	R		-14440	-16316	26797	322.49
241	55.5	R		-15559	-12510	25637	330.79
244	98.8	R		-14846	-7825	23034	340.14
245	58.6	R		-15743	-10550	24906	334.94
246	71.8	R		-12715	-13150	23547	326.05
249	163.4	R		-14505	-1491	21375	356.00
255	231.1	R		-13982	5347	21476	14.42
256	120.8	R		-13017	1434	19886	4.14
257	130.0	R		-14165	-251	20984	359.31
258	137.9	R		-14500	-1448	21367	356.11
260	88.0	R		-11401	-59	18219	359.82
261	88.9	R	G	-10706	2731	17735	8.86
262	110.7	R		-10559	2467	17551	8.08
264	87.5	R		-8329	3643	15579	13.53

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CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY COLOR OF CONCRETE

I.D. MARK	WEIGHT (gm)	COLOR		COORDINATES		FROM GZ:	
		CONCRETE	BEAD	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (mm)
265	86.9	R	G	-4785	5229	12727	24.26
277	118.8	R		-10682	-7300	18962	337.36
278	107.4	R		-8545	-5783	16415	339.37
279	430.5	R		-7908	-6432	16070	336.40
282	91.6	R		-9275	-4532	16719	344.27
283	105.6	R		-8606	-4332	16021	344.31
288	74.4	R		-5996	-2740	13104	347.93
295	131.9	R		-7026	-7260	15632	332.33
303	142.6	R		118	-22978	23934	286.26
318	124.4	R		1548	-24867	25419	281.97
319	156.2	R	B	3099	-26004	26269	278.14
325	125.9	R		4315	-21375	21521	276.68
329	264.8	R		2884	-13430	13994	286.32
330	181.6	R		2994	-13173	13717	286.19
331	306.2	R		3341	-13343	13789	284.61
332	741.9	R		5065	-22977	23044	274.36
334	220.9	R		4627	-12216	12411	280.17
335	1112.6	R		3818	-9395	9862	287.71
336	129.8	R		3808	-9586	10047	287.43
337	156.7	R		5875	-9656	9702	275.58
338	98.2	R	Y	6388	-9052	9062	272.72
339	268.1	R		6578	-8351	8355	271.64
340	272.4	R		6257	-7813	7833	274.11
341	495.9	R		8373	-10072	10191	261.22
343	224.6	R		7004	-11092	11093	269.04
344	1354.5	R		7268	-12013	12022	267.86
345	154.6	R		7405	-11425	11440	267.06
348	205.0	R		8459	-10805	10928	261.37

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CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY COLOR OF CONCRETE

I.D. MARK	WEIGHT (gm)	COLOR		COORDINATES		FROM GZ:	
		CONCRETE	BEAD	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (mm)
350	297.6	R		9415	-10718	11028	256.38
354	120.2	R	Y	6280	-26483	26488	271.16
400	103.9	R		-4139	1654	11081	8.58
405	168.9	R		-9091	-2206	16062	352.10
406	127.5	R		-9587	-1765	16500	353.86
408	129.0	R		-10266	-3641	17467	347.97
411	270.5	R		-6884	-7517	15629	331.25
412	111.9	R		-6957	-7798	15829	330.48
430	134.4	R		-33001	26378	47763	33.52
442	48.7	R		-2353	11485	14698	51.39
443	32.4	R		-2677	9694	13569	45.59
445	69.5	R		-3998	5691	12222	27.75
446	65.8	R		-6573	5762	14578	23.28
447	52.0	R		-6771	5442	14639	21.83
450	60.5	R		-6357	3153	13547	13.46
452	62.1	R	Y	-7145	3327	14354	13.40
453	49.5	R		-7749	2340	14754	9.13
455	46.7	R		-10639	1704	17540	5.57
456	44.6	R		-11752	2460	18732	7.55
457	66.5	R		-10263	-376	17085	358.74
458	75.1	R		-10413	-403	17236	358.66
459	78.2	R		-9490	-763	16326	357.32
460	92.7	R		-6393	-934	13244	355.96
462	104.3	R		-5545	-532	12375	357.54
463	102.4	R		-4613	-2311	11662	348.57
466	89.6	R		-3135	-3415	10522	341.06
470	143.7	R		-4066	-380	10891	358.00
643	171.5	R		-112803	31480	123694	14.74

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CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY COLOR OF CONCRETE

I.D. MARK	WEIGHT (gm)	COLOR		COORDINATES		FROM GZ:	
		CONCRETE	BEAD	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (mm)
644	50.4	R		-133352	36057	144734	14.43
645	281.1	R		-147539	35648	158420	13.00
131	354.0	R/B		-10098	-12430	20992	323.69
157	882.3	R/B		-24597	12709	33889	22.03
227	264.7	R/B		-17720	-7442	25642	343.13
232	416.9	R/B	G	-12358	-23722	30503	308.95
233	75.5	R/B		-8679	-24191	28729	302.64
315	231.8	R/B	G	384	-26906	27664	283.45
355	127.5	R/B		6178	-26764	26772	271.37
356	190.7	R/B		6029	-24496	24508	271.85
404	121.5	R/B		-6979	-845	13823	356.49
407	199.1	R/B	G	-10490	-4024	17770	346.91
427	241.0	R/B		-76245	52535	98283	32.31
475	116.9	R/B		14438	7534	10716	135.32
4	78.6	R/Y		-98801	80882	133031	37.44
8	1065.7	Y	G	-88416	6874	95482	4.13
10	181.1	Y	G	-113970	-38244	126697	342.43
13	164.9	Y		-140974	-120698	190815	320.76
15	119.0	Y		-184455	-61291	200853	342.23
18	391.2	Y		38150	-84270	89906	249.60
19	199.7	Y		57974	-70039	86731	233.86
20	1164.4	Y	R	68347	-50572	79646	219.42
25	70.3	Y		18288	5428	12690	154.67
27	1125.1	Y	R	28374	12433	24885	150.02
28	527.4	Y	R	27827	13017	24715	148.22
40	11893.2	Y	Y	54836	-4186	48200	184.98
41	3845.2	Y	R	62634	1103	55827	178.87
43	7661.9	Y	R	34523	7459	28692	164.93

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CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY COLOR OF CONCRETE

I.D. MARK	WEIGHT (gm)	COLOR		COORDINATES		FROM GZ:	
		CONCRETE	BEAD	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (mm)
44	2079.4	Y	R	34175	3677	27603	172.34
45	2558.6	Y		31093	1323	24311	176.88
47	5376.3	Y	R	33965	-10736	29192	201.58
48	433.5	Y		26596	-6152	20713	197.28
67	174.6	Y	R	34932	-5732	28692	191.52
69	225.6	Y		39317	-6152	33077	190.72
82	314.2	Y		31738	-7909	26145	197.61
83	1319.2	Y	R	27715	-7536	22214	199.83
84	1548.1	Y		27465	-8472	22317	202.31
85	1101.2	Y	R	27727	-8081	22416	201.13
91	637.8	Y	R	20748	-2272	14114	189.26
104	192.7	Y		28117	-7253	22500	198.80
107	353.3	Y		40156	-4451	33634	187.61
111	677.6	Y		32628	-17952	31440	214.82
112	150.7	Y		37597	-36695	47894	230.01
114	497.8	Y		46877	-40053	56648	225.00
116	231.1	Y	Y	52530	-46784	65409	225.66
117	694.8	Y	R/B	26044	-62264	65164	252.84
118	751.2	Y		24153	-60944	63362	254.12
120	216.9	Y		85515	-52611	94663	213.76
121	7248.4	Y	Y	2834	-26827	27121	278.45
122	1061.4	Y	Y	4128	-28994	29118	275.30
123	2231.7	Y	Y	5082	-30731	30780	273.23
124	502.6	Y		5588	-32056	32079	272.20
125	689.0	Y	Y	6830	-25111	25111	269.97
126	217.2	Y	Y	10660	-22178	22508	260.17
127	518.4	Y		-1542	-18693	20477	294.10
128	829.9	Y	R	1177	-21125	21865	284.95

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CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY COLOR OF CONCRETE

I.D. MARK	WEIGHT (gm)	COLOR		COORDINATES		FROM GZ:	
		CONCRETE	BEAD	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (mm)
130	3978.0	Y	B	-5527	-13222	18089	313.04
137	868.9	Y	G	-19273	-3485	26322	352.39
143	1187.4	Y		-22259	2993	29230	5.88
147	661.2	Y	G	-32728	-10430	40898	345.23
148	699.9	Y	G	-33140	-5815	40379	351.72
159	429.9	Y	Y	-7512	-1128	14374	355.50
161	441.0	Y		-3793	-1316	10693	352.93
162	426.7	Y		-6091	2214	13098	9.73
166	510.2	Y	Y	-5366	9439	15413	37.77
167	702.9	Y		-3183	12853	16286	52.11
168	699.5	Y		-4420	10749	15551	43.73
169	290.4	Y		-5894	23152	26413	61.23
170	98.6	Y	Y	-3994	21275	23865	63.06
171	130.7	Y	B	-15734	30242	37725	53.29
173	365.7	Y		-18849	8149	26930	17.61
177	340.0	Y	G	-40767	-4831	47830	354.20
178	666.1	Y	G	-44426	-6050	51600	353.27
184	197.9	Y		-45805	-18053	55634	341.07
185	81.5	Y		-45790	-18066	55624	341.05
186	261.5	Y		-41156	-18901	51563	338.50
190	297.9	Y		-53241	-40112	72222	326.26
191	757.6	Y		-46092	-44150	68910	320.16
195	529.5	Y		-30158	-18122	41178	333.89
196	108.0	Y		-28502	-10187	36760	343.91
199	92.4	Y		-37671	-8990	45388	348.58
200	188.4	Y		-38160	-15487	47570	341.00
201	97.9	Y		-35025	-16597	45014	338.36
209	109.6	Y	G	-19311	-9005	27637	340.98

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CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY COLOR OF CONCRETE

I.D. MARK	WEIGHT (gm)	COLOR		COORDINATES		FROM GZ:	
		CONCRETE	BEAD	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (mm)
210	141.4	Y		-20336	-8478	28447	342.66
213	77.8	Y	B	-25714	-2797	32652	355.09
218	108.8	Y		-32427	9761	40440	13.97
223	124.7	Y		-22666	-1967	29550	356.18
235	105.5	Y		-6663	-25237	28612	298.11
236	101.8	Y		-9613	-18471	24722	311.66
250	139.4	Y		-15146	-230	21965	359.40
252	83.1	Y	G	-14786	1600	21663	4.23
254	219.7	Y		-15377	3698	22501	9.46
259	93.2	Y		-11777	-821	18613	357.47
263	128.0	Y		-10319	2571	17329	8.53
266	118.2	Y	Y	-5726	4218	13235	18.59
267	212.7	Y		-4403	5949	12701	27.93
269	386.2	Y		-4169	1630	11107	8.44
271	190.8	Y		-7559	-18547	23467	307.78
272	147.9	Y		-7115	-17891	22676	307.91
273	184.5	Y		-7485	-11611	18423	320.93
274	163.0	Y	Y	-7049	-11689	18136	319.87
276	595.2	Y	G	-9348	-7762	17933	334.35
280	182.3	Y	Y	-7374	-5525	15230	338.73
284	65.0	Y		-7074	-2897	14191	348.22
286	159.4	Y		-6148	-3052	13320	346.76
294	383.0	Y	G	-6904	-7562	15667	331.14
298	245.6	Y		-3041	-20873	23084	295.28
299	609.5	Y		-1713	-21825	23433	291.35
300	755.4	Y		-828	-22399	23668	288.85
301	275.4	Y		-584	-23071	24230	287.79
302	124.4	Y		-457	-22852	23982	287.66

PAS--3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY COLOR OF CONCRETE

I.D. MARK	WEIGHT (gm)	COLOR		COORDINATES		FROM GZ:	
		CONCRETE	BEAD	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (mm)
304	125.5	Y	Y	-24	-23399	24379	286.30
305	449.1	Y	Y	-302	-23285	24349	287.00
306	2372.3	Y	Y	-2074	-23100	24752	291.05
307	299.5	Y		-2786	-26880	28544	289.66
308	1145.9	Y	Y	-1881	-29577	30830	286.39
309	191.0	Y		-1290	-30302	31368	284.98
310	243.4	Y	Y	-1328	-34094	35054	283.44
311	2036.6	Y	Y/B	145	-31009	31719	282.14
312	281.5	Y		3081	-32908	33119	276.48
313	220.5	Y		3764	-36494	36621	274.78
314	152.8	Y		2594	-25151	25503	279.53
316	403.6	Y	Y	1224	-23392	24052	283.45
317	298.8	Y	Y	1584	-23235	23817	282.69
320	274.9	Y	Y	2882	-23092	23425	279.67
321	450.4	Y	Y	2833	-22765	23111	279.93
322	386.6	Y		3594	-22303	22535	278.22
323	127.2	Y		3247	-23377	23649	278.68
326	651.4	Y	Y	4072	-20936	21115	277.47
328	207.0	Y		4334	-21714	21856	276.53
342	288.4	Y	R/B	7346	-11454	11466	267.36
347	183.8	Y		6144	-10634	10655	273.63
351	194.2	Y		9161	-12689	12903	259.54
352	214.3	Y		8789	-12745	12897	261.21
353	5669.9	Y	R	8941	-23849	23944	264.91
358	267.1	Y		10027	-9685	10203	251.67
359	162.1	Y		10170	-9732	10293	250.99
360	231.5	Y	B	14025	-8441	11099	229.51
361	183.1	Y		15224	-12043	14686	235.09

PAS-3
CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY COLOR OF CONCRETE

I.D. MARK	WEIGHT (gm)	COLOR		COORDINATES		FROM GZ:	
		CONCRETE	BEAD	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (mm)
362	178.6	Y		14124	-12992	14905	240.65
368	135.8	Y		23329	-3258	16830	191.16
370	584.8	Y		28470	-3756	21976	189.84
374	375.6	Y	R	29241	1908	22504	175.14
381	136.0	Y		25003	2873	18410	171.02
384	780.2	Y	Y	3643	26305	26496	83.12
385	422.2	Y	Y	1771	25016	25520	78.59
386	107.5	Y		207	24579	25452	74.95
387	553.2	Y		-2242	25447	27012	70.40
388	141.4	Y		-2694	22744	24653	67.30
389	3942.7	Y		-62	20897	22001	71.78
390	186.7	Y		-153	23357	24376	73.38
391	1105.0	Y	Y	5262	23815	23866	86.26
392	984.5	Y		2384	18668	19187	76.64
393	689.4	Y	Y	5941	16609	16632	86.98
395	327.1	Y	Y	-268	29852	30681	76.65
396	571.8	Y		10549	49472	49612	94.31
397	269.1	Y	B	9086	54596	54643	92.38
398	146.9	Y		-6559	1523	13463	6.50
399	130.6	Y		-6441	1381	13331	5.94
401	357.3	Y	Y	-3387	1384	10298	7.72
402	269.5	Y	G	-2801	810	9653	4.81
409	252.6	Y		-11450	-3495	18599	349.17
414	232.5	Y		-2832	-5986	11356	328.19
415	319.1	Y	G	-3166	-5244	11277	332.29
416	198.8	Y		-18619	4160	25775	9.29
417	69.2	Y		-65760	6017	73823	4.67
418	604.9	Y	R	-73703	1722	80540	1.23

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CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY COLOR OF CONCRETE

I.D. MARK	WEIGHT (gm)	COLOR		COORDINATES		FROM GZ:	
		CONCRETE	BEAD	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (mm)
419	254.0	Y	G	-84781	10143	92159	6.32
421	160.2	Y		-56027	15545	64739	13.89
422	273.9	Y		-73531	20466	82915	14.29
425	139.4	Y		-95569	47411	112831	24.85
428	112.8	Y		-52538	35008	68911	30.53
429	83.7	Y		-67991	11561	75697	8.78
432	109.9	Y	Y	-2827	17753	20204	61.49
433	96.3	Y		-2390	20698	22654	66.02
434	59.7	Y		-3187	20337	22665	63.80
435	41.4	Y		-1394	16189	18152	63.10
436	43.2	Y	Y	-278	17324	18721	67.73
437	52.0	Y		130	18429	19605	70.05
438	56.7	Y		1393	18406	19189	73.58
439	44.3	Y		-1379	19204	20881	66.88
440	29.0	Y	Y	-3232	15668	18614	57.32
441	215.1	Y	Y	-2676	13428	16445	54.74
444	35.5	Y		-2231	9104	12836	45.18
449	137.2	Y		-5607	3288	12853	14.82
464	212.9	Y	G	-4386	-4543	12090	337.93
469	159.8	Y		-3118	-2007	10137	348.58
471	434.8	Y	Y	-2945	4914	10930	26.72
472	117.7	Y		-1976	7001	11241	38.52
473	59.4	Y		1127	11095	12469	62.85
474	4490.6	Y	Y	2726	7759	8772	62.19
484	155.2	Y		27565	-2902	20949	187.96
491	207.7	Y		35460	-5348	29137	190.58
500	161.7	Y		38898	1906	32137	176.60
506	90.1	Y		37159	9030	31657	163.43

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CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY COLOR OF CONCRETE

I.D. MARK	WEIGHT (gm)	COLOR		COORDINATES		FROM GZ:	
		CONCRETE	BEAD	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (mm)
508	392.8	Y		40052	12889	35646	158.80
527	356.8	Y		54098	-1645	47309	181.99
533	127.0	Y		46776	5861	40385	171.66
534	3020.9	Y	Y	1858	18150	18815	74.71
548	126.6	Y		37243	1352	30455	177.45
558	316.3	Y		42884	-5569	36493	188.78
560	517.1	Y		43836	-3598	37192	185.55
561	72.2	Y		44152	-3040	37458	184.66
564	798.1	Y		45042	7816	39015	168.44
565	619.0	Y		48359	5719	41933	172.16
567	154.5	Y		48585	2184	41824	177.01
574	123.1	Y	R	61169	-1239	54365	181.31
582	4525.7	Y	R	67411	14840	62384	166.24
583	215.0	Y	R	62652	14555	57700	165.39
586	1124.2	Y	R	85553	14020	79974	169.90
587	467.1	Y	R	85444	14027	79868	169.88
588	388.2	Y		86462	13556	80789	170.34
589	209.1	Y		89979	12699	84125	171.32
590	6137.4	Y		87194	1410	80389	178.99
593	376.1	Y		104289	483	97473	179.72
594	5311.1	Y	R	115633	-2433	108842	181.28
597	121.0	Y		121940	-1483	115131	180.74
604	78.9	Y		119183	-25756	115279	192.91
610	202.5	Y	Y	26780	23478	30817	130.37
613	119.1	Y		33289	-1375	26506	182.97
616	99.6	Y		31283	-291	24467	180.68
618	165.0	Y	R	27923	3601	21410	170.32
628	190.1	Y		96446	-72362	115194	218.92

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CONCRETE DEBRIS COLLECTION SURVEY
SORTED BY COLOR OF CONCRETE

I.D. MARK	WEIGHT (gm)	COLOR		COORDINATES		FROM GZ:	
		CONCRETE	BEAD	X (mm)	Y (mm)	RANGE (mm)	AZIMUTH (mm)
629	414.0	Y		82501	-65424	100041	220.84
630	69.0	Y		76582	-56624	89851	219.06
631	145.5	Y	R	60159	-45067	69831	220.19
634	129.5	Y		77741	-16092	72725	192.78
635	144.1	Y	R	80409	-16088	75329	192.33
642	89.9	Y		-78326	32074	90985	20.64
646	139.4	Y		-157246	38657	168557	13.26